THE

PALESTINE EXPLORATION FUND

NOTES AND NEWS.

THE following letter has been received from General Sir Henry F. Ponsonby, K.C.B. in answer to that from the Chairman of the Executive Committee accompanying a copy of the Great Map.

Sir, Balmoral, *September 22nd*, 1880.

I am commanded by the Queen to request that you will convey to the Executive Council of the Palestine Exploration Fund Her Majesty's best thanks for their kindness in presenting to the Queen the beautifully executed maps which you have forwarded to Her Majesty.

I have the honour to be, Sir,
Your obedient Servant,

JAMES GLAISHER, ESQ., F.R.S. HENRY F. PONSONBY.

The following correspondence has been received, at the moment of going to press, from the Foreign Office:—

Sir, Foreign Office, *October 1st*, 1880.

With reference to my letter of the 14th July last, I am directed by Earl Granville to transmit to you, for the information of the Committee of the Palestine Exploration Fund, a copy of a despatch from Her Majesty's Ambassador at Constantinople, giving an account of the presentation to His Majesty the Sultan of the Map of Western Palestine, which, at your request, was forwarded through this department to Mr. Goschen for presentation to His Majesty.

I am, &c.,

The Chairman of the Executive Committee, Palestine Exploration Fund. TENTERDEN.

My Lord, Therapia, *September 14th*, 1880.

In your Lordship's despatch, No. 238, of the 14th July last, your Lordship communicated to me the desire of the Committee of the Palestine Exploration

Fund to present His Imperial Majesty the Sultan with a Map of Western Palestine, and directed me to take an early opportunity of complying with their request.

In accordance with your Lordship's instructions, I had the honour yesterday to present His Imperial Majesty with the map in question, and to introduce Lieutenant-Colonel Wilson as having been engaged some years ago in exploring Palestine for the Committee of the Fund, and as having been subsequently an active member of the Executive Commission.

His Imperial Majesty was pleased to accept the map, and to express his appreciation of the interest of the work that had been undertaken by the Committee, and his high sense of the services that had been rendered by Colonel Wilson in connection with the exploration.

The Sultan subsequently expressed to me his wish to confer upon Colonel Wilson the Third Class of the Imperial Order of the Osmanié, but, as your Lordship is aware, Her Majesty's Regulations respecting foreign orders do not admit of Colonel Wilson accepting the decoration which His Majesty was pleased to offer.

I have, &c.,

The Earl Granville, K.G. GEORGE J. GOSCHEN.

The promised pamphlet on the "Biblical Gains due to the Survey of Western Palestine" is nearly ready. It states the amount of work executed by the Surveyors,—points to some of the geographical discoveries that have been made,—and refers to the varied information collected during the operations, which is now in course of publication in the "Memoirs." This is followed by remarks on the bearing of the Survey upon the Verification of Scriptural History; the Topographical Elucidation of the Talmud; Josephus; the Byzantine Pilgrims; the Early Christian Fathers; the Crusading and Arab Chroniclers; the Assyrian, Egyptian, and Samaritan Records; after which a description is given of the most interesting identifications proposed by Lieutenants Conder and Kitchener, and these are finally summed up in an Index with references.

In the preparation of the maps for the Old and New Testaments, which was announced in the last Quarterly Statement, Mr. Trelawney Saunders has written an elaborate account of the Natural Geography of Galilee, Samaria, and Judæa as it is now made known by the New Survey. His work is based on the river-basins of the country, each of which is taken up in detail; the principal valleys and watercourses being duly referred to their proper geographical situation in the basin to which they belong. The connection of each basin with the surrounding parts is also explained.

The Survey being thus elucidated, it is made a standard of comparison with the state of knowledge previously existing; and the geographical gains acquired by it are made clear and manifest. No one can have anticipated the great changes that have become necessary, or foreseen the light which the Survey now throws upon the ground. In the course of this work some interesting identifications have been made and suggested which had previously escaped notice. Doubtless much more remains to be done in this way, and the lucidity which

the Survey imparts to the very varied history of the regions embraced in it, cannot fail to encourage further historical investigation.

Mr. Saunders' work is entitled "An Introduction to the New Survey of Galilee, Samaria, and Judæa, with Notes on its Rectifications of Former Investigations." It is already in the press.

The Maps of the Old and New Testaments will also be accompanied by a small special Handbook, by the same author.

The second issue of the Great Map is at this moment in course of distribution by the Society's Agent, Mr. Stanford. Subscribers should send in their names as speedily as possible, in order to obtain copies of this edition, of which about 250 out of 300 are already taken up.

A third issue will be prepared as quickly as possible. The work of printing has been put into Mr. Stanford's hands, but the plates, which are in course of preparation at Southampton, are not yet ready, so that there will be probably some delay before the work is generally accessible to the public.

The first volume of Memoirs will be issued in December. The order of publication of the volumes will probably be as follows:—

1. First volume of Memoirs. Galilee; with Appendices by Lieut.-Colonel Wilson, and Lieutenant Conder. In December.
2. Arabic Name-lists of the whole Map. Now in the Press and nearly ready.
3. Second volume of Memoirs.
4. Volume of special papers, including those written for the *Quarterly Statement*, by the Officer of the Survey and others.
5. Third volume of Memoirs.
6. The Excavations at Jerusalem; by Lieut.-Colonel Warren.
7. Fourth volume of Memoirs.
8. Natural History, by Canon Tristram; Notes on Geology, &c., &c., &c.

Great efforts will be made to issue the whole work before the end of the year 1881.

The programme of Exploration for next year will be announced in the January *Quarterly Statement*. The Committee will be pleased to receive suggestions and advice from the Subscribers. The proposed Galilee Expedition, the Survey East of the Jordan, new excavations at special points, are at present under consideration.

A Phœnician inscription has been discovered by Herr Schick in Jerusalem. The Committee have taken such steps as seemed best for the security of the stone, and for obtaining a more perfect squeeze than that sent to them. An account of the inscription will be found on p. 238. Another account has been published in the Transactions of the German Association for the Exploration of

Palestine. Phœnician letters can be clearly deciphered on the imperfect squeeze received, but no words have yet been made out.

The Committee are most anxious that the Map should have as wide a circulation as possible. The Subscribers to the Fund may greatly assist them by causing the Map to be ordered for public libraries, school and college libraries and institutions.

It is also greatly desired that *all* those whose contributions have enabled this great work to be completed, may have an opportunity of seeing it. Arrangements have been made with the Rev. James King, of Berwick, for explaining and lecturing on the Map and its uses, during the winter. The Rev. Henry Geary is also ready to give one evening in every week to the Society, provided he be not invited to go too far from London.

The Reduced Map is promised by the engravers for February; it will be rapidly followed by the two ancient maps, already announced, on the same scale. A book will be kept at the office of the Society for the entry of names. The price is not yet fixed, but it will be as low as possible for subscribers.

The Cheap Edition of "Tent Work in Palestine," will be published by Messrs. Bentley and Son among their October books. All the small illustrations which were in the Library Edition, and two of the full-page drawings, will be found in the new Edition, which has also been carefully revised by the author. An additional chapter has also been added on the "Future of Palestine." The work will be read with greater interest now that the progress of the Survey may be followed on the Map.

Colonel Warren's book called the "Temple or the Tomb," will appear at the same time. Its price will be Ten Shillings to the general public. The author, however, wishes the subscribers of the Fund to have the opportunity of getting the book at a reduced price, and arrangements have been made with the publishers by which the book can be sent from the office of the Fund to Subscribers at the price of 7*s.* 6*d.* Application must, however, be made to the Secretary.

Among other books shortly to be issued, are "The Land of Gilead," by Mr. Laurence Oliphant; an account is also promised by Mr. St. Chad Boscawen, of his explorations in North Syria.

The income of the Fund from all sources, from June 28th, 1880, to September 20th, 1880, was £373 7*s.* The amount in hand at the last Committee meeting was £1,478 5*s.* 2*d.*

It is suggested to subscribers that the safest and the most convenient manner of paying subscriptions is through a bank. Many subscribers have adopted this method, which removes the danger of loss or miscarriage, and renders unnecessary the acknowledgment by official receipt and letter.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that these rest solely upon the credit of the respective authors, and that by publishing them in the *Quarterly Statement* the Committee neither sanction nor adopt them.

THE MASONRY OF THE HARAM WALL.

I HAVE recently received a copy of the July *Quarterly Statement*, with some remarks by Colonel Warren on my "Notes on the Masonry of the Haram Wall," published in January last. I have no copy of my notes, nor any papers connected with Jerusalem with me, so that I am unable to reply in detail to Colonel Warren's remarks, but I must ask space to say that he appears to have misunderstood much that I wrote ; and, no doubt unintentionally, to have misrepresented my views with regard to the masonry of the Haram Wall, and the site of the Temple. My views, unfortunately perhaps, differ from those of Colonel Warren, but they are at least the result of honest conviction and some years of study ; I do not think that, in the existing state of our knowledge, any new arguments can be brought forward which would induce me to alter those views, but I am quite ready to abide by the result of future excavation. No one has a greater admiration for Colonel Warren's work at Jerusalem than I have, but I think it only right to state that his excavations, interesting as they were, left the two great questions connected with the sites of the Temple and Holy Sepulchre as much matter of dispute as they were before. The spade alone can settle these questions, and I trust that some movement may be set on foot for recommencing the excavations at Jerusalem ; it is

now known, within pretty narrow limits, where excavation would lead to positive or negative results of great value.

I may add that I am always glad to have any errors in what I have written corrected, my wish being to lay before the public the most accurate and detailed information possible; but I object very strongly to any one formulating theories for me which I do not hold.

C. W. Wilson.

TESTIMONIAL TO MR. GEORGE GROVE.

On Monday, July 19th, a meeting was held at St. James's Hall in order to present to Mr. George Grove a testimonial of respect and appreciation for the many and valuable services he has rendered to Biblical History and Geography, especially in the Foundation of the Palestine Exploration Fund, and to Music and Musical Literature. The following was the address accompanying the purse and chronometer which formed the testimonial.

"To George Grove, Esq.

"We the undersigned ask you to accept the accompanying purse of one thousand guineas and gold chronometer, which we offer you as a token of our appreciation of the great services which you have rendered, in the first place, to Biblical History and Geography, by your valuable contributions to the Dictionary of the Bible, and by your labours in connection with the foundation of the Palestine Exploration Fund; in the second place, to Music and Musical Literature during your long association with the Crystal Palace Saturday Concerts, and more recently by the production of the Dictionary of Music and Musicians.

"In these and many other fields of research in art and literature you have earned the gratitude of your countrymen at large, and the high esteem and friendship of all those associated with you in your labours, and we welcome this opportunity of testifying in a manner however inadequate our gratitude, friendship, and esteem."

The Archbishop of Canterbury took the Chair, and the Dean of Westminster bore eloquent testimony to the valuable contributions of Mr. Grove to Biblical Literature in his own work, *Sinai and Palestine*, and in the Bible Dictionary, and to his labours in the foundation of the Palestine Exploration Fund. We extract from the report of Mr. Grove's reply to the address of the Dean, the following passage of special interest to the subscribers of the Society which he started fifteen years ago. "What was it that started me with the study of the Bible? I had been brought up to know the Bible well, and a great deal of it I knew by heart, but the study of it was quite distasteful to me. What was it that altered my feeling? Why the bitter complaint of my dear old friend, James Fergusson (then a new friend) that there was no index of the proper names of the Bible. He was engaged then, as he has been ever since, in an internecine warfare with everybody who doubted his splendid theory that the round church in Jerusalem—the mosque of Omar—was the church which Constantine built over the tomb of our Lord, or rather,

what Constantine believed to be the tomb of our Lord. Fergusson and I used to meet at the Assyrian Court of the Crystal Palace and talk about many things, and this among them ; and it was in one of these talks that he lamented that he could find no list of the proper names in the Bible. Well, I set to work at once, my wife and I, and we made a complete index of every occurrence of every proper name in the Old Testament, New Testament, and Apocrypha. There it was ; what was to be the next step ? Soon after this came a great event in my life. I saw the Dean of Westminster for the first time. He was then Canon of Canterbury, and it was there I saw him in 1853 or 1854. I had heard of him often from Bradley and other Rugby men, but had never met him. It was in his house at Canterbury ; he was finishing *Sinai and Palestine*, and I recollect as well as yesterday, the way he came forward to me, with his hands out, as if he were welcoming an old friend, and then he showed me what he was engaged on. He showed me that in Hebrew there were distinct words for all the different kinds of natural objects ; for mountains and hills, and rocks and plains, and rivers and torrents, and that while in Hebrew these terms were never interchanged, in the English Bible they were used indiscriminately, and that a great deal of light might be thrown on the narratives if these were set right in our Bibles, and other things of the same sort rectified. He set me alight in a moment, and I fairly blazed up. I rubbed up my Hebrew, of which I had learnt the alphabet at Elwell's school, I got up German enough to plough through Ewald and Ritter, and plunged with delight into a sea of Biblical research. Now the Dean would have you believe that it was I who invented the Appendix to his book, in which the Hebrew typographical terms are described and catalogued. But that is only his way of putting it. It was *he* who invented it, and I just carried out what he devised, and did the mechanical part of the work for him. Next came the *Dictionary of the Bible ;* and my connection with that I owe entirely to the Dean. Dr. Smith had proposed the dictionary and was looking about for help, and Stanley told him of me, and of my list of proper names ; and there we were."

A STATION OF THE AGE OF STONE NEAR TYRE.

By Dr. Lortet.

In his remarkable researches in the geology of the Lebanon, Botta discovered that several caverns in Syria contain bone breccia more or less broken, and fragments of pottery. Later, in 1864, during his journey taken with the Duc de Luynes, M. Louis Lortet discovered in the grottoes near the mouth of the Nahr-el-Kelb (the ancient Lycus), at a short distance from Beyrout, numerous flints, worked into scrapers and knives. These instruments, undeniable testimony of a very primitive industry, are

found either lying exposed on the floor of the caves, or imbedded in the cement of the bone breccia.

I had the good fortune, while in Syria, in the month of June last, to find a new pre-historic station, presenting certain remarkable peculiarities.

In the hills, situated at the distance of two hours and a half, walking, east of Tyre, is the little village of Hanaweh, placed on a rounded mamelon, not far from the great sarcophagus called the Tomb of King Hiram (Kubr Hiram). On the north, opposite the village of Hanaweh, is found another hillock, on which may be seen the ruins of a Phœnician citadel (visited and described by Renan). At the base of this ancient fortress winds the wild and arid Wady-el-Akkab, deeply cut in the thick strata of the cretaceous limestone.

Following the left wall of this ravine in an easterly direction, towards the villages of Khureibeh and Kana, at the height of about 800 feet above the level of the Mediterranean, we come to an escarpment of the wall which is prolonged to a considerable distance. Upon these walls are carved in bas-relief, upon the rock, numerous statues, from 2 ft. 6 in. to 3 ft. 3 in. in height. They present the appearance of a remote antiquity. The heads are, for the most part, in profile ; but the eyes are represented on the face, as is the case with most archaic types. The dress consists of a simple tunic, crossed on the left side. At the distance of some yards from these singular monuments, at the foot of a cliff hewn by the pick, and about 13 feet high, we remarked certain enormous blocks rising nearly 10 feet above the soil, about 20 feet broad, and 16 feet thick, forming a rock of reddish colour, excessively hard, and offering an almost invincible resistance to such hammers as we had. This mass is formed of a conglomerate or rather a breccia, containing myriads of worked flints, and numerous fragments of teeth and bones. The soil around is covered with flints, rudely worked, among which we found the flakes and scrapers of the type called *Moustierian.* The breccia, which seems to be deeply sunken in the earth, rises again to the surface of the soil, a few yards lower down. These great blocks, isolated on all sides from the surrounding limestone, are composed of flints and bones. The flints are either yellow or black, and are of very fine grain ; they have been in places exposed, in consequence of disintegration resulting from the action of atmospheric agents ; but it is absolutely impossible to detach them from the matrix ; they will break up rather than separate from the extraordinarily hard cement which surrounds them. The few fragments which we extracted with great difficulty may belong to the genera *Cervus*, *Capraer*, *Ibex*, *Bos*, and *Equus.* The bones broken up into fragments are absolutely indeterminable.

This station seems to date from the highest antiquity. The flints present a very primitive form, much more archaic than those which we found in the grottoes of the Nahr-el-Kelb, and it must have required a long series of ages to give these bones the hardness of the most compact porphyry. I believe that this matrix may have been formed in a cavern, the walls and roof of which were hacked away by the Proto-Phœnicians ; authors perhaps of the rude figures I have already spoken of. The breccia, too

hard for their tools, would be left alone by the workmen. This is the only way of explaining how it comes to be thus disposed in enormous lumps on the abrupt sides of a valley more than 200 feet deep. The excavations which we made at the base of the sculptured rocks taught us nothing as to their origin. I do not think that the works are those of the Stone Age; but I believe it can be proved that in this very limited space of ground we may see the remains of the industry of those races which have successively inhabited the country: (1) The men whose tools and the remains of whose food we have just described; (2) The Proto-Phœnicians, sculptors of the bas-reliefs and the archaic figures. (3) The Phœnicians of historic times, who had cut and hollowed on the rocks their subterranean chambers, their presses and their oil mills, so learnedly described by Renan.

THE SURVEY OF WESTERN PALESTINE.

THE following Extracts from some of the notices of the Great Map will be read with interest.

From the "Times" (September 7th, 1880).

The importance of this map to the study of the Bible can scarcely be exaggerated. All previous maps have been constructed from the imperfect observations of individual travellers, and distances and names were given for the most part conjecturally and at random. Now we have a survey of the country executed by English Engineer officers, and setting forth the topography and nomenclature with as impartial accuracy as an Ordnance map of an English county. It is now for the first time possible to read the narrative of Joshua's marches, of Judas Maccabæus, &c., and to follow the Biblical histories generally, in an intelligent way, mountains, valleys, roads, villages, and towns being for the first time accurately laid down.

About 10,000 names incorporated in this map were found by Lieutenants Conder and Kitchener, the officers to whom the survey was intrusted, and the memoirs include a number of others discovered by the French and German explorers, Guérin, Renan, Sepp, and others. Among all these exist in some form or other all the Biblical names, only 622 in all, of Western Palestine. These older Hebrew, Canaanitish, and Phœnician names, although they never disappear and leave no trace behind, are often very difficult of recovery, and their satisfactory identification is impossible without the aid of a work like the present, where exact topography and authentic information as to the present nomenclature are available to supplement and verify the deductions of archæological and philological research. In some cases, and these are comparatively few, the old name has survived almost unaltered, such words as Beit-Lahm and

Bethlehem, Akka (Acre) and Akko, Bir Seba and Beersheba being such obvious survivals that, taken in conjunction with the collateral evidence from topography, no doubt whatever can be left as to their identity. Sometimes the older name has locally survived a later, though still remote, attempt to change it, as in the case of the ancient Bethogabra, which, though known for centuries as Eleutheropolis, is still called by the inhabitants Beit-Jibrîn, a form that is, if anything, older than Bethogabra itself. In other cases the identification is equally certain, though not by any means apparent to the uninitiated; for instance, Laish has in the Bible the superimposed name of Dan, meaning "a Judge," and the spot where we should naturally look for the remains of the town is called at the present day Tell el Kadi, "the Judge's mound." So Paneas became Cæsarea Philippi, but is yet known as Baneas. Sometimes an old name having some approximate signification in the ancient Semitic tongues is misunderstood by the modern Arabic-speaking population, the Hebrew *nahl*, "a stream or watercourse," being always confounded either with *nakhl*, "a palm-tree," or *nahla*, "a bee." It will readily be understood that a study of the name-lists will yield most interesting results to Biblical students. In spite of the previous identifications, some 200 out of 400 known places have been proposed by the Survey officers. The rest will no doubt, be recovered without much difficulty when the forms and meanings of the names here given have been thoroughly examined.

The geography of Palestine can now be rewritten, for the map of the Survey enables us to lay down the tribal boundaries, &c., accurately; and as the physical features of the country are here exactly set forth, what was before mere conjecture and hypothesis can now be stated as ascertained fact. It is not the religious interest alone that makes the comparatively small territory of Palestine so worthy of deep and careful study. In ancient times the traffic between East and West went of necessity through the country, which became the highway of the world, the focus of trade, and the ground on which rival nations contended for pre-eminence. Here Egyptian, Assyrian, Persian, Greek, Roman, and Moslem civilizations and religions by turns held sway, and traces of their influence and ruins of their magnificence are found at every step. Here is the origin not only of Christianity and Judaism, but of most of those ancient myths around which Grecian art, learning, and philosophy clustered. On the sea-coast by Joppa arose the cult and myth of the fish-god Dagon, which appears elsewhere in the legends of Perseus and Andromeda, of Set and Typhon, of St. George and the Dragon, and even of the Archangel Michael and the Devil. From the Tyrian shore, a little further to the north, set out Cadmus, who colonized Greece, and whose very name is perpetuated to-day in that of the river Casimiyel and the little Moslem shrine of Neby Casim, the Prophet Cadmiel or Casmiel. Close by is the shrine of Neby Mashûk, the Prophet "Beloved," which is nothing more or less than the Egyptian temple set up to the terrible Melkarth or Moloch, under the euphemistic title of Miamûn, or the Beloved of Amon. On to the

shore above Beirut flows the Nahr Ibrahîm, the river of another "Friend of God," here identical with the well-beloved Tammûz or Adonis. And not only the ruins and the names, but the people themselves are curious and interesting objects of study, and Canaanites, Hittites, Amorites, Hebrews, Tyrians are still to be easily identified among the Fellahîn and Bedawîn of the country; in fact, to the theologist, archæologist, ethnologist, and historian every foot of Palestine has matter for research and contemplation, and all this has been for the first time made available as a whole by the labours of the Palestine Exploration Fund. Of these most interesting departments of the subject we shall speak more fully when the promised volumes of the memoirs appear; to the present publication, the map of the Survey, we can give unqualified praise. It is the joint work of Lieutenants Conder and Kitchener, and was completed in circumstances of exceptional difficulty, the disturbed state of the country in 1877 making it necessary to work day and night (Sundays included), often in the face of considerable personal danger.

The survey was commenced in January, 1872, and finished in 1877; it has cost during that period about £20,000, of which a large sum was expended from time to time in printing reports, &c. The necessary money was raised principally through the energetic action of the secretary, Mr. Walter Besant; but it must have been relinquished had not Mr. Morrison, the treasurer, himself advanced funds from time to time to carry on the operations at certain critical periods of the Fund's finances.

The earliest Palestine Exploration Society in this country was founded in 1804, but attracted little support. In 1808 the committee published a volume entitled, "A Brief Account of the Countries adjoining the Lake of Tiberias, the Jordan, and the Dead Sea" (Hatchard, Piccadilly), which was, however, only a translation of some rough notes made by the well-known traveller, Seetzen. Two travellers were then sent out by the Society for the purpose of exploring the country, but owing to the accounts they received of the dangerous state of the country they did not proceed further than Malta.

The Society after this lapsed into inactivity and its very existence was forgotten until 1834, when all the books, papers, and funds were handed over to the Geographical Society. In 1840 a fresh association was founded, with no better results than the former; but in 1864 a survey of Jerusalem was made under the direction of the Ordnance Survey Department by Captain (now Lieutenant-Colonel) Wilson, Baroness Burdett-Coutts supplying the required funds. This called general attention to the defective state of information respecting the country, and in May, the next year, the present Society was formally constituted, principally through the efforts of Mr. George Grove, under the name it now bears, "The Palestine Exploration Fund." Captain Wilson, who had completed his survey, was again sent out in company with Lieutenant Anderson, and the exploration of the country was commenced in earnest. In 1867 Captain Warren commenced the excavations in Jerusalem itself, the progress of which was watched with great interest by the public, and resulted in adding largely

to our knowledge of the subject and deciding several weighty problems concerning the sites of the Holy Sepulchre and the Temple. In 1869–70 Mr. (now Professor) E. H. Palmer, accompanied by Mr. C. F. Tyrwhitt Drake, made a journey of exploration through the Desert of the Exodus for and at the expense of the fund. On his return the survey of Western Palestine was commenced and continued till its completion last year. Mr. Tyrwhitt Drake, who had an extensive acquaintance with the Arabic language and manners, accompanied the officers in the field and afforded most valuable aid in obtaining the correct nomenclature and other information from the natives; his death at Jerusalem in 1874 was a great loss to the Society and to geographical science. M. Clermont Ganneau, a well-known French archæologist, was also employed for a long time by the Society, and his labours in the country are of the greatest practical importance. The archæological and philological information obtained by these gentlemen is embodied in the work of the Society and immensely increases its value.

It must not be imagined that with the publication of the map and memoirs the work of the Society is at an end. Much that is very important remains to be done, especially the survey of the country east of the Jordan (of which an American association has already completed a reconnaissance map), and the exploration of the cities and remains of the Hittite Empire, to the existence and importance of which attention has lately been called in *The Times*. The work produced by the Palestine Exploration Fund during the 14 years of its existence is of such a character as to merit the continued support of all those who are interested in explorations which yield so much that is important to religion, history, and science.

II.

From the "Builder" (July 17th, 1880).

By the completion of the map and the accompanying memoirs, the position of the Palestine Exploration Fund towards the public will be wholly changed. Instead of coming forward as a body appealing for subscriptions and furnishing, in their quarterly reports, somewhat meagre results of the application of the funds, varied as they have been from time to time, they will hold the status of an association which has succeeded in endowing the scientific world with one of the most successful outcomes of the patient toil of the explorer. It is one thing, moreover, to explore, and another to survey. Any one can do the first,—after a fashion. Few people can do the second,—in any fashion. And of those few, perhaps the officers of our Royal Engineers comprise the greater number,—so far as those who speak our own language is concerned. The Ordnance Survey of England, yet unfinished, and that of India, with its magnificent lines of triangulation, are large operations compared to the construction of the map of Palestine. But they are neither more scientific nor more accurate, within the required limits; neither more original nor more exhaustive. The latest improvements in

the technical work of the surveyor and the map-maker have been introduced in the survey of the Holy Land. The officers who executed it braved danger, ill-health, and hostile attack. Literally, they shed their blood in the service; and that with as much devotion as did the crusading knights. All the party suffered seriously in health. One member of the exploration actually sank beneath the toil and the climate. Judged by this kind of cost,—a cost that no money can repay,—the survey is a costly affair. Judged by the outlay of money, on the one hand, and by the graphical and literary results on the other, it must be considered wonderfully cheap. In the actual state of the East, the map has a daily increasing value. Were it not actually in the hands of the subscribers, very conclusive reasons might be urged against its publication at the present moment. As, however, it is now so far before the world, the best thing to do is to let all those who are interested in the East know of what a valuable document they may become possessed. One of the most venerable of English scholars connected with Bible study, recently said that "he blessed God that he had lived to see the completion of this map." It is a work done once for all,—well done, and worthily done; and we trust that all concerned in its production will receive their due share of the recompense for faithful and long-sustained labours. We need name no names. Honour is rendered to whom it is due in the title and signature of the map, and in the details of the memoir; and we think it will be felt that Christendom owes a debt of gratitude to all the faithful labourers who have combined to produce this important monument.

III.

From the "St James's Gazette."

Some great Asiatic power has long had its capital on the Orontes. At the early date before indicated this northern power was that of the Khita, or Hittites, whose capital was at Kadesh, near Homs. After the death of Alexander the Great, the Seleucidæ, or Greek kings of Asia, founded Antioch and Seleucia, and fixed their capital at the former city. Under different names, and successive dynasties, history has repeated itself. The struggle of the kings of the eighteenth Egyptian dynasty with the kings of the Khita was continued, 1,500 years later, by the wars between the Ptolemies and the Seleucidæ. In the long interval, the Powers that successively became supreme on the Euphrates and Tigris Valley—the Kings of Elam, of Nineveh, of Babylon, and of Persia—extended their conquests to Egypt. On each of these occasions the shore line of road from Tyre to Gaza and on to Pelusium formed the line of military advance and communication. So it was when the Romans came on the scene; when the Parthians, in the days of Herod, took Jerusalem; when, one after the other, the Persians under Chosroes, the Saracens under Omar, the Turks under Melek Shah, the Egyptian Caliphs, and the Crusaders under Godfrey of Bouillon became masters of the Holy City. The importance of Jerusalem itself was rather

religious than military; but the command of the roadway through Phœnicia and Philistia to the East was always one of the main objects sought by those who aspired to ascendency.

Precisely the same value now attaches to this region. This was clearly understood by the first Napoleon, as was shown by his attack upon Acre. The opening of the waterway through the Suez Canal, in substitution for the long voyage to India by the Cape, only increases the strategical importance of the coast-line of the Levant. Under any stable government, or in the case of any return of prosperity to the East, there can be no doubt that the considerable traffic which even at the present time is carried on from Antioch to Aleppo would be largely increased; and that thus the ancient route through Mesopotamia to the Persian Gulf would be reopened. The key of the Orontes—the northern gateway, as Port Saïd is the southern gateway, of the roads from Europe to India—is now kept in the isle of Cyprus. The masters of Antioch and of Aleppo will command one line of Eastern traffic, as the masters of Alexandria and Port Saïd will command the other. The strategical importance of Acre, flanking both these great lines of international communication, it is now hard to disguise. It follows from this glance at the character of the position which Palestine has ever held, and continues to hold, as the gateway between the East and the West—or rather as the barbican which commands the two avenues of the Euphrates and Red Sea lines of communication—that the importance of such a knowledge of the country as may be attained by the military surveyor may at any time prove to be critical. In case of a struggle for the mastery of Palestine, the same physical causes which determined the site of decisive battles in past times are still active. An army advancing from Damascus on Port Saïd would cross the Jordan Valley near the Sea of Galilee, and would advance with the greatest ease up the broad highway of the Valley of Jezreel, to the point where now exist the ruins of Mujeddá. This spot is identified by the officer in command of the survey with the Megiddo of the Second Book of Kings—the Ar-Mageddon of later sacred writers. In the 23rd regnal year of Thothmes III., as we learn from an inscription on the wall of a temple in Thebes, the hostile King of Kadeshu, with his Phœnician allies, waited for the King of Egypt in Maketha (Mujeddá). The result of the battle which then took place may be read in Brugsch's "Egypt Under the Pharaohs." A thousand and four years later Neco, King of Egypt, taking advantage of the war between the Kings of Assyria and Babylonia, marched towards the Euphrates. At Mujeddá he fell upon Josiah, King of Judah, who opposed his passage; and the virtual overthrow of the Jewish monarchy took place upon the field of battle. At no period of time since the date of the eighteenth dynasty of Egypt has Palestine been united under a ruler able to hold a thoroughly independent position between the Asiatic and African monarchs. It is probable that the most brilliant period of the Israelitish power was the reign of Herod the Great. But Herod was an Edomite, not a Jew; and although

acknowledged as king, he was nominated by the Roman Senate, and was in fact dependent on Rome. From his reign the imagination flies back to that of Solomon, still famous in Eastern legend. But if Solomon ruled "from sea to sea," from the Lake Asphaltites to the Mediterranean, and "from the river to the end of the land"—that is from the Egyptian frontier to the northern limits of Palestine—and pushed his boundaries to Hamath and to Tadmor, he did not rule either Phœnicia or Philistia. In the former part of the country the King of Tyre treated with the King of Israel on equal terms. "Even unto the land of the Philistines" is a limit fixed in the Book of Chronicles; and Gaza was taken from the Canaanites by the King of Egypt far on in the reign of Solomon. Thus but little of the coast could have been under the sway of the wise king. In the time of his son the Egyptians mastered a great part of the territory of the King of Judah, and the division between the Jews and the Samaritans reduced the kings of either division of Israel to a very feeble condition. The seaports of Tyre and of Sidon are the points which would have offered the surest stay for a permanent autonomous rule of Palestine; but none such is known to history.

HISTORY OF THE HITTITE INSCRIPTIONS.

About eight years ago, the Hamath tablets, one of which had been seen by Burckhardt, were practically offered to the attention of Orientalists, in the shape of a re-discovery, by Burton and Drake. Squeezes, photographs, and hand copies were, I believe, at once attempted with more or less success, and the copies being sent to England were printed by the Anthropological Society, and were said to contain 500 different letters.

It is not fair to judge those early copies by our present knowledge, and those who laugh at their uncouth appearance would do well to remember that even as it was, the stones containing them were very nearly broken up by the villagers of Hamath. Had they been thus destroyed, nothing that has been found since would have been equally useful, for even in their then state I was soon able to see there were four peculiar tablets built up on one and the same plan, yet differing in what I supposed to be certain names, which names I, not unnaturally at the time, supposed to be those of Kings. This fact gave a solid starting-point, and all subsequent progress has been due in fact peculiarly to them. These four will often recur when men begin to investigate this subject, and I propose to call them A1, A2, A3, and A4. Besides these, there were three others which I call B, C, and D. All these came from Hamath.

Three or four years after this, our lamented George Smith copied an inscription across the back of a decapitated priestly-looking figure at Jerebis or Europus.* The figure still lies, I believe, at Jerebis, "un-

* Possibly Carchemish, but I know of no proof.

houseled, unanointed, unaneled," and the remarks made above, which hint at the comparatively low value of mere copies, are equally applicable here ; for though Major Butler has recently made another copy, it has become clear that the function of the best of copies is principally to corroborate *fac similes* obtained by more accurate methods.

This figure I should wish to call E, leaving F for a well preserved portion of door-post now visible to the public at the British Museum. G is the melancholy relic of a warrior next to it at the same place. All these were from Jerebis or Europus, leaving H for Mr. Davies's copy of rock figures at Ibriz in Caramania.

The Hamath and Europus inscriptions differ considerably from each other. Many Hamathite forms look like brokendown European ones. If so, the Hamathite are the later. It may be as well here to mention that in my opinion none of the small findings at Karabel, Boghos Keui, Eyuk, or Ghiaur Kalessi are Hittite at all.

Between the discoveries of the Hamath and Europus tablets, it may well be imagined there was a good deal of interest manifested in so new a subject. In Europe, photographs were shown about, many of which were wrong side upwards ; and the chief stone having been squeezed in two operations, the two impressions were taken photographically with lights on the right or the left side indifferently. I was thrown back a good deal by all this, till the Palestine Exploration Fund received authentic casts from Beyrout. In Turkey, a Pasha, whose name I have forgotten, pounced down one night on to the unfortunate cottage, bridge, and bazaar, into whose walls A, B, C, and D had been imbedded. Next morning there were great holes found in the masonry of Hamath, and the tablets were well on their way to Stamboul. At Beyrout, however, on the road, certain cunning Europeans offered to clean the stones. This included of course the taking of casts ; and Dr. Ward was by this means soon able to reduce the 500 alleged letters to about 50. Dr. Ward's restorations from the real stones are much more accurate than mine, and remain, so far as I know, the only restorations yet published. They are to be found in the journals of the Palestine Exploration Fund.

It might have been expected that the finding of such curious documents would have stirred up at least a dozen decipherers. Such however, was by no means the case. In fact, I really do not know that even one person besides myself has attempted the task. On the contrary, when the study of five years resulted in a clear success, I found I was being judged by great and learned Orientalists who knew not the Newtonian Philosophy, and forgot that of Grotofend. Even as Champollion began with his Cleopatra, and Grotofend with his Darius, and Newton with his apple, so began I with a conviction based on good reasons that the language I should disclose would be Semitic.

As to the bearing this fact had on my decipherments, it might no doubt be made interesting enough to show how I began to discover the letters, roots, and formatives of a Semitic language, by assuming that I had found the word "di," and that it was the ordinary Aramæan sign of the

genitive case. Then also, I observed a great number of words in four letters, where the third letter (clearly a formative), seemed to be a "vau." Then again, an emphatic-looking aleph seemed to appear at the right places. All this, and more, pointed to a Semitic language with about eleven formatives, and Mr. Davies's figures from Ibrez are clearly Semitic. What then more likely than that the required dialect should be Syro-Chaldæan, which, as we know, finally swallowed up all the spoken languages round about, including Hebrew? True, the names of some of the Hittite kings may not have been Semitic, but a people's language need not have been a court's language.

It was by a careful study of letters, roots, formatives, and sense, each supporting the other three, and each receiving from the other three support, that I gradually found myself becoming tolerably confident as to what I had to look for, and the transliteration of letters became no longer mere guesswork. The existence and recognition of the formatives lead us by a very long step to a knowledge of the family of the language we are engaged upon. Then again, if the knowledge of letters leads to that of roots, the knowledge of roots will no less certainly lead to that of letters; and the result was that three or four years ago I was already in a position to show Mr. Boscawen a sequency of four words, and to explain the general meaning of the A tablet in the pages of the *Athenæum*. It is, I think, a pity that, as a hard matter of fact, the history of the Hittite inscriptions means, during this period, the history of my own labours in transliteration. An adversary in the field would have portended an interesting tournament, but if no one has worked in the subject, no one would fight about it. It may perhaps be supposed that Professor Sayce and Mr. Hyde Clarke impugn my results. I do not know that they trouble themselves to do so; and the statements made occasionally by these two gentlemen, however interesting to themselves, are to me so totally incomprehensible that I can offer no opinion at all upon things which they seem to think important. My subject is decipherment; theirs, in a general way, seems to be the ethnology of places or languages I know nothing about. Perhaps I am wrong in this description.

When I speak, however, with such confidence of my own success, I think I am bound to give my readers some sort of explanation as to why I feel able to do so. I suppose I may assume that most people know a little about the doctrine of chances. If the chance of several independent events happening, is $\frac{1}{2}$ for each event, then for two events it is $\frac{1}{4}$, for three events $\frac{1}{8}$, for four events, $\frac{1}{16}$, and so on. Now suppose I take one of the Hamath tablets, A, and find 18 letters in it. There are 68 signs, but each letter has several signs exactly as in Egyptian. The chance is millions upon millions to one that the 68 signs would not have been cut on the stone in such a way as to make sense, except by a superintending intelligence wishing such sense to be given. It is also millions upon millions to one that all the letters will not go exactly into forming ten "roots." Yet I will give the reader the very roots themselves without inflections or formatives.

The ten roots are :—

Nganah, he sang.
Sakhak, he played. } instruments.
Nagan, he struck. }
Rapa, he cured.
Sachar, he bargained.
Nasa, he carried.
Sahid, he witnessed.
Jah, he will be.
Halil, he sang.
Baal, he possessed.

The sense to be got out of these roots, with their formatives, is, that a person named Sahidijah paid money to a temple for a musical service (see Neginoth in the Psalms of David), that he might be cured. Yet out of this fee Sahidijah claimed right to include a service to his own Baalim at a place called Iban.

It is interesting to observe that the second and fifth of the above roots belong to the names of the patriarchs Isaak and Issachar respectively.

Such then are the "brief annals" of the Hamathite votive tablets. The Jerebis mural engravings may perhaps be thought to be more important. I think that when competent men turn their minds to this matter, I shall find in this word Jerebis, either victory or Westminster Abbey. In the first place, on the left-hand stone lintel, at the top we find the phonetic signs i, r, b, z, preceded by the determinative of a city. This is crucial. Allow the letters and you allow the city. Disprove the letters, and great therewith is the fall of the city. In the last few words, however, of George Smith's statue occurs the sign of a raven, the Semitic of which is Jereb. This is preceded also by the sign for a city, and followed by the letter z, forming as a whole the word "City of Jerebiz." It is very greatly to be lamented that we have not yet received either a squeeze or a photograph of this statue. I may here mention a rather remarkable corroboration of my success with the stone lintels. After the erection in the museum, I found I could construe the right-hand lintel but not the left. After a few months, ten or twelve small fragments were sent us, which may be seen now to belong to the left lintel, showing that all the ends of the left lintel stones had been sawn off. Thus, if I had been able to make sense, my system would have been fearfully damaged instead of profited thereby. At the time when the Anthropological Institute published these lintels, I was not aware of all this. I can translate their first line but not their second.

These lintels seem to me to relate to the probable worship of the Bull Europus, from whence the Greeks got their legend of Europa. Like the Hamaths, they too begin with the preparation for a musical service, not for cure of health, but apparently for joy at bringing back the Bull. This reminds us of the Egyptian Apis worship. There were probably annual games, and a piece of land seems to have been given free of rent, for the

purpose of seeing the wrestling matches. Here we have again a patriarchal root in the word "putal," from which comes "Naphtali."

I have alluded to an unexpected amount of backwardness in accepting what I have done. Yet have I spoken with 8 or 10 competent men, with whom, curiously enough, the chief objection is that the language as represented by me is not a pure one. Here a Hebrew word, there a Phœnician. This, however, seems to me exactly what might have been expected, for we know that the Aramæan ultimately devoured all the neighbouring dialects, which could not have been done without a good deal of mixing. In fact, this very objection really grants what I myself say, viz., that the language is Semitic, with a large predominance of Aramæan grammatical forms.

DUNBAR J. HEATH.

KHITA.

As my earliest communications on Khita, then called Hamath, appeared in the *Palestine Exploration Journal*, I take the opportunity of communicating the later results. One of those articles was on the Town Names of Canaan, &c., in which I showed the affinity of these to the same class in Asia Minor, (Lydia, Phrygia, &c.) præ-hellenic Greece, Etruria and Italy and Iberia or Spain. This was my basis of argument with regard to the affinity of languages which was thence to be deduced, as has since been done. I have also supplied a few words of Canaanite illustrative of this relationship. A series of papers, not embraced in the Journal, records the latest progress of the investigations.

In the last year Professor Sayce recognised Khita characters in Lydia and Phrygia in Asia Minor, and this year he has published his identification of Khita as the other language with Assyrian in the seal of King Tarkondemos, discovered by Dr. Mordtmann.

The Khita of this seal I have found on the Carchemish monument. This gives us the name in the southern Khita district. Linguistically, I have stated that Canaanite is allied to Lydian and Phrygian and these to Etruscan as the town names indicated. These languages have been exterminated by Semites and Aryans. The living representatives of the languages are to be found in Africa, among those tribes formerly under Khita subjugation.

Employing the materials at my disposal I assign to the two animal heads in the inscriptions the value of Tar(a), and Ku(no), for which I find equivalent animal meanings, having also the signification of King and God. These animals are the fetishes or totems of the kingly race. Timmi, which is separable, standing for || || means son, child or offspring. The word I suggest for the emblem of the King is Manes or Minos. The name of the country I cannot explain. ⧋ the emblem for country must be Ni, a word for land, region, place.

It is a matter most deserving of remark that most of the characters on the seal, and many of those at Carchemish are to be found on a MS. from Western China, even to such minute details as | | | under the animal's chin. This MS. I believe to be a copy of ancient Kitai sculptured inscriptions, like those of Hamath and Carchemish.

HYDE CLARKE.

THE SITE OF GATH.

I.

THE site of the Philistine City of Gath has hitherto eluded modern research. The Crusaders placed it at Yebna, which is now identified with the ancient Jabneh, Jabneel, and Jamnia. Dr. Robinson sought for it in vain, but he referred to Deir Dubban, as corresponding with the position assigned to Gath by Eusebius. ("Bib. Res." ii, 66.) Fifteen years later, Dean Stanley wrote "Gath has entirely disappeared." ("Sinai and Palestine," 255.) After a journey in Philistia in 1857 expressly in search of Gath, the Rev. J. L. Porter, editor of "Murray's Handbook of Palestine," and the writer of the article "Gath," in Smith's "Bib. Dic.," concluded that its site was Tell-es-Safieh, the Crusaders' "Blanche Garde." Dr. Thomson regarded Bethogabra, Eleutheropolis, Beit Jibrîn, and Gath, as all one and the same city. ("The Land and the Book," ed. 1879, pp. 564, 565.) Lieutenant Conder falls back on Tell-es-Safieh, and carries his conclusion so far as to give a picture of that place as one of Gath ("Tent Work," p. 148), besides calling the present chiefs of the village, "Sheiks of Gath" (p. 155).

In the "Quarterly Statement of the Palestine Exploration Fund," just published, another site is advocated by the Rev. W. F. Birch, on the basis of a remarkable collocation of names, mostly brought to light by the new survey of the Fund. These are (1) Wady el Ghueit (Gath), between Beit Jibrin and Ashkelon, in connection with (2) Kulat el Fenish, or the Castle of the Philistine; also (3), Beit Affeh, representing "the house of Aphrah," (4) es Suafir, the biblical Saphir, and (5), Khurbet Jelediyeh, which is held to be an Arabic corruption of Goliath. The third and fourth are among the names connected with Gath by the Prophet Micah (ch. i, 10–16), who was a native of Mareshah in this part.

Before a conclusion is formed upon this very alluring proposition, attention is invited to another site, also brought into notice for the first time by the Pal. Ex. Survey. It is Khurbet Abu Gheith, which may be rendered the Remains of Gath. This place is situated at the head of the Wady el Hesy, here called el Muleihah, which falls into the Mediterranean Sea between Gaza and Ashkelon. The position is intermediate between Gaza and Hebron; and it commands the main route from the nomade region of the Negeb or South Country to the lowland hills of the Philistine Shephelah; just as Gaza protects the Philistine coast road, and

Hebron guards the highway through the mountains of Judah from the same aggressive quarter.

An examination of all the passages in the Bible relating to Gath, appears to afford a strong support to the claims of this site, in addition to those derived from its identical name and strategical position. In 1 Samuel vii, 14, it is written : "And the cities which the Philistines had taken from Israel were restored to Israel, from Ekron even unto Gath." In this passage Ekron and Gath seem to be used to indicate the northern and southern extremities of Philistia, like Dan and Beersheba in reference to the Twelve Tribes. This use is thoroughly supported by the identification of Ekron with Akir, and of Gath with Geith ; but if Gath be placed at Kulat-el-Fenish, or at Tell-es-Safieh, or at Beit Jibrin, then Gath is no longer a point on the southern frontier of Philistia, for all those places are in the central parts, and the sites of Eglon and Lachish, and the venerable Gaza are further south though not so much so as Geith.

Again in 1 Samuel xvii, 52, it is written, "And the wounded of the Philistines fell down by the way to Shaaraim, even unto Gath, and unto Ekron."

In Dr. Wm. Smith's "Dictionary of the Bible," art. Sharuhen, Dr. George Grove quotes Prof. Knobel ("Exeg. Handbook on Joshua, xv, 32"), as calling attention to Tell Sheriah on the Wady Sheriah for the site of Shaaraim. Thus Shaaraim is found just south of Gath (Geith) ; and the Wady Sheriah at this time constitutes the definite boundary line between the Felahin, who are the successors of the Philistines, and the nomade Azazimeh, who have succeeded the Idumeans and the Amalekites. Shaaraim seems to define in the text, the extreme southern limit of Philistia, as Gath did its southernmost city and fortress. This second reference to Ekron and Gath in juxta-position, serves to mark the extreme character of the Philistine flight up to the northern and southern limits of their country.

In considering the connection by the prophet Micah of Aphrah and Saphir with Gath, it must be remembered that those places are only two out of ten included in the passage (Micah i, 10, 16). Gath appears to have been then the chief city of Southern Philistia, as it probably was also when Hazael, King of Syria, made it a special object of his conquest, before attacking Jerusalem (2 Kings xii, 17). Thus it became the first object of the Morasthite prophet's theme, who then proceeds with his composition by allusions to Aphrah, Saphir, Zaanan, Beth-ezel, Maroth, Lachish, Moresheth-Gath, Achzib, Mareshah, and Adullam the glory of Israel. That Aphrah and Saphir are noticed next to Gath, may be owing to their position in the plain immediately under the eye of the writer at Mareshah. To notice the other places in the list is not requisite for the present purpose, unless the opportunity be taken to suggest the identification of Beth-ezel with Deir-el-Asl, eastward of Geith. In conclusion, it may be added that the word Gueith seems to be Arabic, and of a distinct meaning from the Hebrew Gath, a wine press ; a point, however, which the present writer would prefer leaving to Prof. Palmer.

July 21st, 1880. TRELAWNEY SAUNDERS.

II.

With regard to the suggested identification by Mr. Trelawney Saunders, I have to explain, that being asked by the Secretary what would be the probable modern form of Gath, I explained that it would probably appear as *Jatt*, but that it was quite possible that the doubled letter in it might suggest a false analogy with the more common word *Jennat*, so that the name might appear as *Jennat* or Jenata. Instances of these false derivations in local names are common enough: witness Rás en Nâkûra. "The Cape or Promontory of the Trumpet," became Súr (*i.e.*, the "rock"—Tyre) is known to Arabs in the meaning of a "trumpet," but is little understood in its real and primitive sense.

E. H. Palmer.

III.

Professor Palmer is of opinion that Gheith is not admissible as a modern form of the archaic name, Gath, because their meanings are different, and their initial letters are never interchangeable. He argues that Gath would take the Arabic "form of Jatt or even Jennat, signifying a garden." With this idea, a search was made in the map, and about 9 miles north-east of Gheith, the ruined site of Jennata was found. Thus far, the Professor's view finds support.

But the following objections to it are suggested. (1), Gath is used five times in the Bible as a common noun, and in each instance, the sense of the passage demands the unvaried interpretation of a "wine-press." To accept "garden" as the meaning of Gath would destroy the forcible character of each of those passages, viz.: Judges vi, 11; Nehemiah xiii, 15; Isaiah lxiii, 2; Lamentations i, 15; Joel iii, 13. See "Englishman's Hebrew Concordance," and Davidson's "Analytical Hebrew Lexicon." The anglicised Arabic for a wine-press seem to be Ma'aser or Mugsara. Neither the form nor the meaning of Jennata seems therefore to connect it with Gath.

It may be observed that in the case of a name, however distinguished in history, the site of which has ceased to be identified for many centuries, there is nothing surprising, if in its traditional descent, it has undergone changes both of form and meaning. The wonder is that anything remains of the original word, after transmission through Philistines, Hebrews, Egyptians, Syrians, Idumæans, Greeks, Romans, and Arabs. But the shadow of a name is of value when historical incidents contribute to identification, and it may be thought hypercritical to attach much weight to a linguistic difference.

(2), another objection to Jennata is derived from its position. The flight of the Philistines from the Valley of Elah was first directed to the Gai or Ravine (doubtless that of Wady es Sunt) which carries the drainage of Elah into the Philistine Plain at the northern base of Tell-es-Safi, whence it passes north-westward to the sea at Ashdod. From the mouth of the ravine, they were chased by the Israelites northward up to the gates of Ekron. They also appear to have fled southward, when they reached the plain, for their wounded fell by the way of Shaaraim even

unto Gath. Now the road from Tell-es-Safi to Shaaraim through Gath, (Gheith) follows a line which is nowhere higher than 500 feet; while, to reach Jennata, the highland whence they had come, must be reascended to a height exceeding 1,000 feet. Facility of flight is therefore certainly not in favour of Jennata. Besides Jennata would be properly described as on the high road from the Wady es Sunt to Beersheba, and it cannot be supposed that Shaaraim would be mentioned unless it related to a line quite distinct from that leading to the more noted place.

August 19th, 1880. TRELAWNEY SAUNDERS.

IV.

FROM the publication of the Survey Sheets may be expected to result a large number of proposed identifications. Until, however, the memoirs are also in the hands of students it may perhaps be doubted whether more harm than good may not be done to the cause of Biblical topography by the hasty suggestions of those whose acquaintance with the facts must often of necessity still be incomplete. In order for an identification to become generally accepted it must of course be shown to be satisfactory—1st, as fulfilling all the requirements of the Biblical narrative and of those of ancient authorities; 2nd, as presenting philologically a sound radical identity of the ancient and modern names; 3rd, as referring to an indisputably ancient site. Partial acquaintance with the literature of the question, unsound or fanciful derivations, and identifications with modern ruins are each and all weak points which are certain to be discovered so soon as the complete memoir is in the hands of the public; and although we may hope that students will derive valuable discoveries from the Survey Sheets, it must not be forgotten that the ancient sites have all been conscientiously sought by the Survey Officers on the ground under circumstances more advantageous than those of the student who only has the map before him.

The question of the site of Gath is a case in point. The search for this venerable fortress occupied the attention of the Survey party for many weeks during the spring of 1875. It was certainly a disappointment to be unable to report anything very novel in connection with the subject.

Had a leading question been ever permitted, no doubt a dozen sites might have been found; but as this was not done, I will venture to say that no modern title representing the Hebrew name Gath will be found on any of the Survey Sheets within the bounds of Philistia. Had such a word existed in the name Indexes it could not have escaped the searching scrutiny to which the original Arabic lists have been subjected already by Professor Palmer, and, perhaps I may be allowed to add, by myself.

I.—Philological Considerations.

The word Gath (גת) occurring in the names Gath-hepher, Gath Rimmon, Gethsemane, Gittha, Gittaim, and Gitta, is translated "wine

press" and its correct representative in Arabic is the name *Jett* spelt with the first or soft T.

The Samaritan town of that name, the birthplace of Simon Magus, is probably the same *Gethu* or *Gethuna* mentioned in the Lists of the Conquests of Thothmes III, and also noticed in the account of his expedition against Megiddo as if within two days' march of the latter town—*Geuta* (as it is there called) being on the road leading northwards by the land of the Anakim, while the road from Sharon actually pursued by Thothmes led eastwards by Aaruna. A suitable position for this town is found at the village of *Jett*, which stands at the foot of the Samaritan hills west of the plain of Dotham. In this case the name Gath or Gitta is thus found still to exist in the correct equivalent in Arabic.

The Galilean Gath (Gath Hepher), the home of Jonah, has lost its original name, and is now known as *el Mesh-hed* "the monument," because it contains the supposed tomb of Jonah, which has been venerated by Jew and Christian alike at least since the 4th century A.D.

As regards the name Gath-Rimmon, further indications will be found below, but while speaking of the name itself a word may be said as to various proposed identifications of the sound.

Colonel Warren R.E. proposed some time ago to recognise the name Gath in the final syllable of the name *Huleikât* applying to a village south-east of Ascalon. This name appears however to be the diminutive form of *Helkât*, the Hebrew Helkath or "fields" which was also the name of a town of Asher. (Josh. xix, 25.)

Mr. Trelawney Saunders recognises the name in *Khurbet Abu Gheith* or "ruin of the father of rain," but however alike the words Gath and Gheith may appear in English letters they could scarcely be more distinct in Arabic and Hebrew, for the simple reason that they *do not contain a single letter in common.*

The word *Gheith* is written with the strong guttural letter *Ghein*, one of the two modern forms of the Hebrew guttural *Ain.* The *Ei* represents the Arabic—Y the Hebrew *Yod*, and the letter *The* (th) is properly speaking one of the two modern equivalents of the Hebrew *Sin.*

Thus written in Hebrew the word *Gheith* would become (עיש) *'Aîs* or possibly *'Aith*, and the name if proposed as equivalent with Ai or Aiath would be less open to objections on philological grounds than would be the case if supposed to represent Gath.

Abu Gheith will be found elsewhere on the map as the name of a Sheikh, and it may be noted that we have not as yet a single well-authenticated instance in which the word Abu (father) has become a prefix to an ancient Hebrew name. It serves in fact as a rule to distinguish a modern appellation from a really ancient local name.

The two names which Mr. Birch proposes to connect with Gath are those of *Wâdy Ghûeit* and the ruin of *Jeledîyeh.* With regard to the former he states that "this probably implies that there has been a place of that name." The assumption is, however, scarcely a safe one, for *Ghueit* signifies soft or well-irrigated soil, being the same word found in the title

Ard el Ghûta or "fertile land" applying to the district surrounding Damascus. The title being thus purely descriptive of the rich character of the soil in this fertile plain does not of necessity imply the former existence of a town. Mr. Birch has moreover fallen into the same error with Mr. Trelawney Saunders in supposing the *Gh* or *Ghein* to represent the Hebrew Gimel—a substitution of which there is no known instance.

The suggestion that the name Jeledîyeh is derived from Goliath and that Gath after losing its real name was called after that of its famous champion is, to say the least of it, not founded on any Scriptural or other literary evidence. The place in question is the site of the Crusading fort called Galatia.

The authority of Professor Palmer has been quoted in favour of the statement that the name of Gath might survive under the form *Jenneta*.

Professor Palmer will no doubt have a good reason for his assertion, but I am at present unable to understand it. *Jenneta* would appear to be a derivative from the root גנן like the Hebrew Gannim and the Aramaic Gennath, "gardens," whence the Arabic *Jenn.*, pl. *Jennân.* So far as our present experience goes, such changes have not been proved to have taken place in the nomenclature of Palestine. The ancient names when existing are preserved with but slight alteration and the *sound* appears to survive more often than the meaning (*e.g.* Rimmon, Ramah, Endor, &c. the meaning, of which names is now not understood by the peasantry.) It is indisputable that the most probable modern form of the name Gath is the Arabic *Jett*, and an identification founded on the assumption that a radical change had occurred, substituting a double N for the double T, would appear to be extremely unsafe unless supported by very strong testimony of another order.

II.—Archæological Considerations.

The various sites above mentioned appear unsatisfactory moreover, on account of the character of the ruins there found.

The ruin of Abu Gheith is extremely insignificant, consisting only of heaps of fallen masonry and remains of a modern wall. The description given in the *Athenæum* (Aug. 7, 1880) of this spot as "commanding the main route from the Nomad region of the Negeb or South Country to the lowland hills of the Philistine Shephelah" is scarcely justified by anything in the map or memoir. The ruin lies low and is not on any main road, but more than a mile from the track leading from Beersheba to Gaza. The ruin of Jeledîyeh in the same manner does not appear sufficiently important to have been that of one of the five great Philistine strongholds. On visiting the site in 1875, I found the ruins to occupy a piece of level ground and to include the remains of a small tower apparently of Crusading origin.

Judging from scattered references the site of Gath was of great strength. The city was walled, and according to the Rabbinical writers (Midrash Vayikra Rabba, ch. 5) it was a fortress. No remains of anything resembling the site of a large fortified town are to be found at either of

the two ruins above noticed, and we have in this case an illustration of the fact that the Survey map by itself without the memoir is likely rather to mislead than to assist those who are unacquainted with the country.

III.—Topographical Considerations.

In the absence of any trace of the name of Gath we are obliged to base our arguments on the very indefinite indications of position to be found in ancient writers.

In the first place, Gath was a fortress of the Philistines and a royal city in the time of David. The five lords of the Philistines ruled in Gaza, Ashkelon, Ashdod, Gath, and Ekron, and whenever those cities are enumerated the name of Gath occurs next in order to that of Ekron. (Josh. xiii, 3; 1 Sam. vi, 17, &c.) Of these cities the other four are well known as occurring in the plain south of Jaffa. The earliest mention of the Philistine country connects it with the sea-coast north of Egypt at the time of the Exodus, at which time there is good reason to suppose the plain of Philistia to have been subject to the King of Egypt. (Cf. Exod. xiii, 17; and xxiii, 31; and Ezek. xxv, 16.)

There is no good reason for supposing that the Philistines possessed any portion of the Shephelah or low hill country extending between the maritime plain and the high watershed ridge. The name Shephelah has it is true been improperly applied by some writers to the plain itself, but the Philistine plain is called in the Bible *Sadeh* (שדה) rendered "Country" in the A. V. (1 Sam. xxviii, 5 and 7), and is thus distinguished from the Negeb or "dry" country and from the Shephelah or "lowlands." The strict distinction always noticeable in the Old Testament, between the various natural districts, each distinguished by a peculiar Hebrew name, is one of the most interesting incidental indications of the familiarity of the sacred writers with the scenery of their native land.

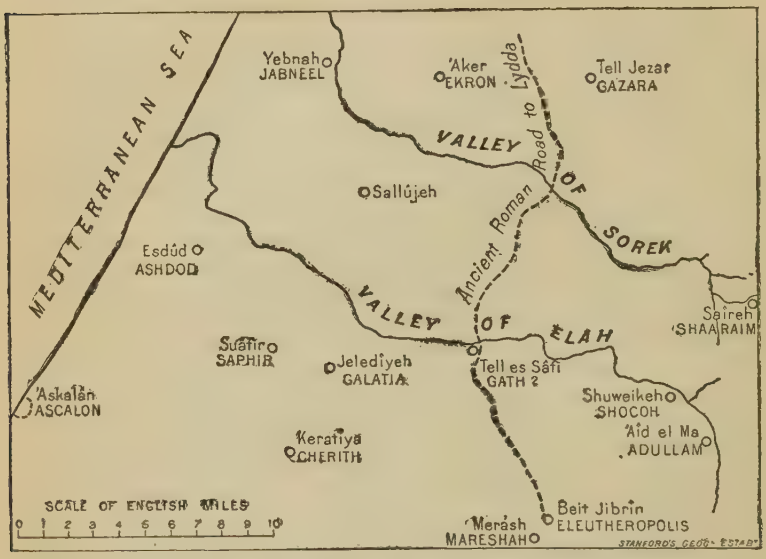
It is in the Plain of Philistia, or on its confines, therefore, not in the Shephelah nor in the Negeb, that Gath must be sought.

The second indication of position is found in the various notices which seem to imply that Gath was a frontier town between the Philistines and the Israelités. Thus after the death of Goliath the pursuit extended to Gath (1 Sam. xvii, 52), and again Gath is enumerated among the frontier fortresses of Rehoboam (2 Chron. xi, 8) with Shocoh, Adullam and Mareshah, cities of the adjoining Shephelah towards the north-east of the Philistine plain.

A third important indication is found in the account of David's battle with Goliath, which took place in the Valley of Elah near Shocoh and Azekah (1 Sam. xvii, 2). This great valley (Emek) the name of which in Hebrew signifies "Terebinths," is commonly identified with the present *Wâdy es Sunt*, still remarkable for its magnificent terebinths, and on the south bank of which the important ruin of *Shuweikeh* (Shochoh) is still found.

After the death of Goliath the Philistines are said to have fled "until

thou come to the valley (Gai) and to the gates of Ekron, and the wounded of the Philistines fell down by the way to Shaaraim (or according to some translators 'to the gates') even unto Gath and unto Ekron," (1 Sam. xvii, 52).



Now in tracing the flight from Shuweikeh towards the Philistine plain (Sheets xvii, xx and xxi, of the map), it will be observed that the broad valley (Emek) near that ruin contracts to a gorge (Gai) or ravine east of Tell es Sâfi, and that another direct route leads north-west, passing beneath the hill on which is the ruin of *S'aîreh*, which M. Ganneau has identified with Shaaraim.

Supposing the name Shaaraim to be in this passage that of a town, its occurrence is of value as serving to localise the scene of combat. The ruin *S'aireh* correctly represents the probable position of this town, which was one of the cities of the Shephelah belonging to the same group with Adullam, Azekah and Socoh (Josh. xv, 35). Mr. Trelawney Saunders appears to be in error in supposing the site in question to be *Tell Sheri'ah*, much further south, belonging to a group of towns in the Negeb.

It is true that the name Shaaraim does occur in one passage (1 Chron. iv, 31) among the towns of Simeon, but it seems probably to be a corrupt form in this case of the name Sharuhen, which takes its place in the corresponding list of Josh. xix (verse 6). The name *Sheria'h* is much closer to Sharuhen than to Shaaraim because the guttural occurs at the end of the word and not before the R.

To suppose the pursuit of the Philistines to have extended southwards from the valley of Elah, a distance of 20 miles over the intricate country

between Shuweikeh and the little ruin of *Abu Gheith*, or again 8 miles further south to *Tell esh Sheria'h* appears very unsatisfactory ; the impression conveyed by the sacred narrative being that after a short pursuit the Israelites returned to the field of battle to spoil the Philistine camp. (1 Sam. xvii, 53.)

Nor is the above-mentioned passage the only one in which Gath is noticed in connection with cities towards the north and north-east of the Philistine plain. The towns noticed in connection with the fortress in question are as below :—

Ekron	('Aker)	1 Sam. vi, 17.
Shocoh	(Shuweikeh)	1 Sam. xvii, 2.
Adullam	('Aid el Ma)	2 Chron. xi, 8.
Mareshah	(Mer'ash)	2 Chron. xi, 8.
Jabueel	(Yebnah)	2 Chron. xvi, 6.
Shaaraim	(S'aîreh)	2 Sam. xvii, 52.

If Gath were to be sought in the south of Philistia we should expect to find its name in connection with those of Eglon, Lachish, En-Rimmon, Beersheba, and other cities of the Negeb with which it is never connected.

The situation of Gath was presumably known to Josephus, who men tions it as being in the territory of Dan (Ant. V, 1, 22) and again with Ekron as on the border between Judah and the Philistines (Ant. VI, 2, 3), and in a third passage as being at the opposite extremity of Philistia to that marked by Gaza (Ant. IX, 13, 3). These incidental notices, but especially the first, are only explicable on the supposition that Gath was near Ekron on the north of Philistia. In one passage it is true that Josephus places Gittha (probably Gath) in Idumæa, mentioning the place as a walled city (1 Wars XVII, 2) but the title Idumæa is used by Josephus, like the Daroma of the 4th century, to indicate a very large district of Palestine south of Jerusalem (as is fully shown by Reland).

Gath-Rimmon (or "lofty Gath") is mentioned among the towns of Dan (Josh. xix, 45), and there seems no good reason for supposing that this town was distinct from the Philistine Gath ; but the border line between Judah and Dan is not defined with sufficient accuracy in the Bible, for many of the border towns (such as Zorah and Eshtaol for instance) appear to have been claimed by both tribes. It appears however tolerably clear that a town called Gath lay near Ekron on the borders of the Philistine plain and of the Shephelah of Judah.

Such indications as we possess in the ancient accounts of the Old Testament, Josephus, and the Talmud appear then to support the following deductions :—

1st. Gath was a city of the Philistine plain (שדה) and is not to be sought in the Negeb district.

2nd. Its name always occurs in connection with towns towards the north of Philistia, or in the Shephelah north-east of the Philistine plain.

3rd. It was a walled city and an important fortress, possibly standing on high ground (as implied by the name Gath-Rimmon).

4th. It was on the border between the Philistines and the children of Judah, and according to Josephus on the south border of Dan.

These deductions are all fatal to the proposed site at Abu Gheith, which is not (as has, it is hoped, been made clear) satisfactory from either a philological, a topographical, or an archæological point of view.

In the works of Jerome we have very definite indications as to the site which he supposed to represent Gath. Jerome and Eusebius cannot be quoted as authorities unless their testimony agrees with that of the Bible, yet their indications have preserved for us the sites of Gezer, Bezek, Adullam, and a great many other important Biblical towns.

Jerome (Præfat ad Jonam) notices Gath as lying between Eleuthropolis (Beit Jibrîn) and Diospolis (Lydda). Eusebius (Onomasticon) places Gettha 5 Roman miles from Eleutheropolis in the direction of Diospolis, and again under the head of Geth Rimmon as being 12 Roman miles from Diospolis near Eleutheropolis. In another passage Gittha is placed between Antipatris (Râs el 'Ain) and Jamnia (Yebnah), and in another commentary Jerome places Gath on the border of Judah between Eleutheropolis and Gaza (evidently an error for Gazara or Gezer, the site of which on the line from Eleutheropolis to Diospolis was well known to Jerome). These indications agree in placing Gath in the north of Philistia.

The distances are unfortunately inexact, as the distance from Eleutheropolis to Diospolis is about 24 English miles and not 17 Roman miles; but the only really strong site on the ancient Roman road from Beit Jibrîn to Lydda is the fortress of Tell es Sâfi (Blanchegarde), situated about 7 miles from the first mentioned town. It is with this important fortress, guarding the entrance to the valley of Elah, that Dr. Porter proposes to identify Gath; and in this case the Philistine flight through the Gorge (or Gai) to their nearest frontier fortress extended over only seven miles from the field of battle along a natural line of retreat.

Such, so far as I am able to collect the evidence, are the main facts in connection with this question. Gath cannot be identified until the name *Jett* is recovered, and as the name of the city drops out of the enumerations of Philistine places in the later books of the Old Testament, so also it seems to have dropped out of the nomenclature of Philistia. In face, however, of the Biblical evidence existing and of the concordant indications of the early Christian fathers, it seems idle to search for the site of this famous fortress in any district other than the north-east part of Philistia.

No notice has been taken above of the connection between the positions of Gath and Ziklag, for the simple reason that the position of Ziklag is an extremely obscure question. The site of *Sallûjeh*, west of Tell es Safi, has claims to represent the city which Achish gave to David. The position of *Zuheilîkah* which I proposed in 1875, is more satisfactory, but there are strong objections from a philological point of view. *Asluj*, proposed by Robinson, is inadmissible, as not being in the Philistine "country" (שדה) and as too far from Aphek. Finally even if Ziklag were fixed the effect on the question of Gath would be insignificant. Further

exploration may lead to the recovery of the site, but no amount of examination of the Survey Sheets seems to me likely to settle the question of the position of Gath.

C. R. C.

V.

The philological disagreement between Lieutenant Conder and Professor Palmer, shows that philology is not the safest of ground for an argument on the present case. Attention was called in answer to Professor Palmer's Jennata, to the sweeping sources of disturbance to which names have been exposed in this region. There is another example of just such a change as the name of Gath appears to have undergone, if Abu Geith is the true site. It is found in the connected name of Shaaraim, which the Rev. E. Wilton exhibited as identical with Shilhim and Sharuhen in a clear tabulated comparison of the three lists in Joshua xv and xix, and 1 Chron. iv. Wilton's "Negeb," page 157. Also Article *Sharuhen*, in Smith's "Bib. Dict.," vol. iii, 1229.

The variations of Shilhim, Sharuhen, and Shaaraim, are so instructive, and bear so much upon the difficulties surrounding Gath, that a temporary divergence to the explanation of them from the more direct consideration of Gath, seems desirable. The first form conveys the idea of "sending away" in the plural number; that is, in two directions; or across a frontier from either side. When the idea is applied to a source of water, the singular number is used, as in Shiloah. It is a most apt name, and the first applied to this frontier station of Judah, in Joshua xv, 32. Davidson gives to Shilhim the meaning of "armed men," which may fairly be derived from the root, and is not inappropriate to a frontier station between nomad Avites or Hivites, and settled agricultural Philistines.

Then follows quickly in Joshua xix, 6, the same place with the name of Sharuhen, the identity being indicated at least, if not fully proved, by the substitution of it for Shilhim in the second of the parallel lists already mentioned. This change is made in the transfer of the town from Judah to Simeon, and as if to take it from the idea of being "sent away," as inappropriate to the place of passage between two brotherly tribes. Shilhim is therefore called Sharuhen, which Davidson treats as an abbreviation of Sharuthhen, and interprets as a "pleasant lodging." Davidson's "Analytical Hebrew and Chaldee Lexicon." In other words, when the town was transferred from Judah to Simeon, the place was regarded as no longer associated with the idea of exilation, but rather with that of relaxation and rest.

Finally in Chronicles (1, iv, 31), in the list of Simeonite cities brought up to the time of David, Shaaraim has taken the place of Sharuhen. Shaaraim means "gates," and the root signifies to cleave or part. An explanation of the change of name is found in verse 27, where it is recorded that the Simeonites had not multiplied like the children of Judah, and further on, in verses 39–43, it is intimated that the nomadic character of the south country or Negeb, had survived the failure of the

Simeonite occupation. The new name retains the plural number as an indication of the double aspect of a frontier town, and the survey appears to confirm abundantly Dr. Knobel's identification of the site with Tell esh Sheriah. This modern name is the last variation of its form, and it is quite in accordance with that connection of sound and idea that appears to regulate these changes. It is now "the mound of the watering place." An accumulation of broken pottery on its summit is one of the obvious marks of the antiquity of the site, which is further indicated by the veneration attached to it, and by its continuing to be the burial place of the Hanajereh tribe. Guerin, "Judée," ii, 288.

After this it seems easier to understand how Gath may have become Gheith, even with Abu prefixed to it. Again, is the change greater than that of Goliath to Jalut in the Koran? see art. "Goliath," Smith's "Bib. Dict.," and why is the Arabic Jett preferred? Does Jett ever mean a wine press? Accepting Lieutenant Conder's interpretation of Abu Gheith as the Father of Rain, the designation suggests an attribute of mystic power, and so may be carried back to some incoherent traditional remembrance of Goliath. Here too Lieutenant Conder, unassailable, appears to be in conflict with Professor Palmer on a philological point.

Turning now to Lieutenant Conder's archæological argument, it may be asked, if anything more could be expected to appear at the remains of Gath, at first sight, and on the surface, than the "heaps of fallen masonry," which the surveyors found at Abu Gheith. To understand the position of Abu Gheith the sheets 19, 20, 23, 24, should be put together, and then it will be seen by experienced eyes, that the valley in which Abu Gheith is found, lies close under the mountainous region indicated by heights above 1,000 feet. As the flight of the Philistines was not to Gaza, they must have kept close under the mountains by Summeil and Arak el Menshiyih, and on by the valleys coming down to that place from the south; and still skirting the mountains on the east, they strike the valleys coming from the south by Abu Gheith, "on the way to Shaaraim," or Tell esh Sheriah. Now, it will be admitted that the fugitive Philistines fled from the valley of Elah, through the Wady es Sunt, to the plain at Tell es Safi. Here undoubtedly a part of them turned northward to Ekron, and it is contended that another part turned southward to Gath. But must Gath be looked for in the south? The affirmative answer is found in 1 Sam. vii, 14, where it is recorded that the cities taken by the Philistines from Israel were restored to Israel, "from Ekron even unto Gath." Here there is exactly that kind of juxta-position, by which the northern and southern limits of the Land of Israel are defined in the familiar reference to Dan and Beersheba. The full extent of Philistia is thus expressed, "from Ekron even unto Gath," and to mark still more emphatically the completeness of the subjugation of Philistia under the divine inspiration of Samuel, it is added "and the coasts thereof did Israel deliver out of the hands of the Philistines." 1 Sam. vii, 5 to 14.

This testimony to the southerly position of Gath seems undeniable. That being granted, it may be affirmed that no passage from south to north

between the mountainous heights exceeding 1,000 feet, and the Gaza route can be found to facilitate a flight southward so much as the line between Arak el Menshiyeh and Abu Gheith, this line being also on the way to Shaaraim or Tell esh Sheriah.

As it is in this part of his discourse that Lieutenant Conder adopts Monsieur Ganneau's identification of Shaaraim with Saireh, the objections to that site are made here instead of being connected with the foregoing notes on Shaaraim. Kh. es Saireh is only about four miles distant on the north from the field of battle, which took place in the Valley of Elah, below Shuweikeh or Shocho. The Philistines came up from the west, the Israelites from the east; and Saireh was probably in the rear of the Israelite camp, and on one of the roads by which they had gathered together, while the gorge of es Sunt would have been in the rear of the Philistine position. Is it likely then, that the Philistines would have fled northward by way of the Wady en Najil, and across the Israelite lines, when the Wady es Sunt was entirely in their own hands and open to them?

Again Saireh is close to the northern border of the tribe of Judah; whereas Shaaraim was in the allotment of Simeon, certainly on the south of Judah.

It is wrong for Lieutenant Conder to lead his readers to conclude, that I have supposed the flight of the Philistines to have passed over the mountains between Shuweikeh and Abu Gheith, for I carefully took them through the Wady es Sunt into the plain, before dividing them right and left to Ekron on the north, and Gath on the south. It also appears to be a strange mistake to speak of that pursuit as "short," which was "until thou come to the valley (Wady es Sunt) and to the gates of Ekron" ('Akir); a distance of 15 miles as the crow flies, and 20 miles by way of Wady es Sunt.

I believe that I have now said enough to justify my adherence to Kh. Abu Gheith as the recovered site of long lost Gath.

TRELAWNEY SAUNDERS.

THE SITE OF MEGIDDO.

I.

IN the modern name of the River Kishon, Nahr el Mukutta, may there not be a trace of the ancient Megiddo, which no doubt stood on its banks. It is true that the meaning of the modern name is the River of Slaughter, and the fitness of that meaning to the history connected with the ancient name, may account for the substitution. There are numerous instances of alterations of the same kind, as Cape Sanjak, for Cape St. Jacques.

Dr. Robinson identified Megiddo with Lejjun, the ancient Legio. In all

probability the remarkable Tell el Mutsellim, or Mutasellim, was the ark or fortress of both cities, but while Lejjun on the south of the Tell, doubtless represents Legio, it may be suggested that the site of the City of Megiddo is indicated by the remains extending northward and westward from the Tell, including el-Medineh, or "the City." Lieutenant Van de Velde places Megiddo on the Tell itself, but Robinson affirms that there is no trace of any kind to show that a city ever stood there. It appears to be quite impossible to separate Megiddo from the Kishon or Mukutta as Lieutenant Conder proposes. The alluring resemblance to the ancient name in Khurbet el Mujedda, is too heavily counterpoised by its situation in the Jordan Valley, at the eastern foot of Mount Gilboa, and south of Beisan; a situation not only too far apart from Taanach and the Kishon, but also divided from them by the bold Heights of Gilboa.

In connection with Megiddo, Dr. Robinson has contended against identifying Legio with Maximianopolis, which was said by Jerome to be a later name of Hadad-rimmon. In Dr. Robinson's opinion, this place had a more southerly site, and the suggestion has been confirmed by Lieutenant Van de Velde (i, 355), who claims Rummaneh near Tannuk as still retaining the essential part of the old name Hadad-rimmon; but he agrees with Van Rourmer against Robinson in connecting Legio with Maximianopolis.

10th July, 1880. TRELAWNEY SAUNDERS.

II.

LIEUTENANT CONDER proposes to locate Megiddo by the Jordan in the plain of Beisan, where the name *Mujedda* yet remains. In his "*Handbook*" he says "Egyptian and Assyrian records do not as yet cast much light on the subject." There is one passage of interest which confirms his conjecture. It is given in *Brugsch's Egypt* (English edition) ii, p. 106, in a poem of Pentaur, of the time of Ramses II. It reads as there given, "Describe Bethsheal, Thargaal, the Ford of Jirduna how it is cursed. Teach me to know the passage in order to enter into the city of Makitha, which lies in front of it." This, if correctly rendered, seems conclusive.

ARCH. HENDERSON.

ON THE RIVER KANAH, THE BOUNDARY BETWEEN EPHRAIM AND MANASSEH.

THE River Kanah* was identified by Dr. Robinson† with the present Wady Kanah, a name applied to a part of the main channel of the system of watercourses which has its outfall through the Nahr el Auja. The main channel begins near Yanun, 7 miles south-east of

* Joshua xvi, 8; xvii, 9.

† Robinson's "Bib. Researches," iii, 135; "Phys. Geog. Holy Land," 100.

Nablus (Shechem) on the edge of the Jordan Valley, and at an altitude of 2,700 feet above the sea. It passes through the Plain (Sahel) of Muknah, and between Ain Abûs and Kuzah; descending from the mountains into the Plain of Jaffa at a place called es-Zakur, on the south of Hableh. The highland here has a height of 469 feet, while the plain at its foot is only 125 feet at Jiljulieh. Beyond Jiljulieh the Wady has a permanent stream and turns abruptly, running to the south-west for about 4 miles as far as Tell (Mount) el Mukhmar, where it receives three large tributaries, and continues to the sea as the Nahr-el Auja (Crooked River). The outlet into the Mediterranean is nearly 4 miles north of Jaffa.

Stretching across the country from the edge of the Jordan Valley to the sea-shore, the Wady Kanah appears to be well fitted on that account to mark the boundary between Ephraim and Manasseh. But two objections have been made to it. The first, because it excludes the important city of Shechem (Nablûs) from the territory of Ephraim; and the second, because it reduces Ephraim to a width which is deemed to be unequal to the importance of that dominating tribe. Hence attempts have been made to identify the River Kanah with other watercourses further north.

The Palestine Exploration Map throws new light on the identification of the River Kanah with Wady Kanah, through its exposition of the places which are connected with the River,* in the biblical record of the boundary. In Joshua xvi, 6–8, it is written:

"And the border went out toward the sea to Micmethah on the north side and the border went about eastward unto Taanath-Shiloh, and passed by it on the east to Janohah; and it went down from Janohah to Ataroth, and to Naarath and came to Jericho, and went out at Jordan. The border went out from Tappuah westward unto the river Kanah: and the goings out thereof were at the sea."

Joshua xvii, 7–9, contains a parallel passage, much amplified, with reference to Tappuah, which it will save repetition to quote further on.

The interpretation of the passages receives fresh light and remarkable distinctness from the Palestine Exploration Map. Micmethah in Joshua xvi, is connected with Asher in Joshua xvii, Micmethah is the starting point eastward in chapter xvi, and westward in chapter xvii. In the latter, "Asher-ham-Micmethah in the Hebrew is rendered in the authorised version "Asher to Micmethah," but some critics consider that the Hebrew relates to one place, and for this view there will be seen to be some foundation. Asher means "happy," Micmethah means to sink, perhaps together the words may be translated – the happy depression or valley. On turning to the new map to discover "Asher-ham-Micmethah that lieth before Shechem," there will be found the ruin El-Azeir (Asher) in the Plain of Muknah (Micmethah,) just outside

* In Hebrew *Nachal*, which like the Arabic "Wady" signifies a torrent, bed or watercourse

Shechem, on the high road to Jerusalem, and on the south side of Wady Kanah. The identification of Micmethah with the Plain of Muknah is suggested by Lieutenant Conder, R.E., in his "Handbook to the Bible," page 264; but he takes no notice of El-Azeir, except to insert it on the map. Following up the text eastward, Taanath-Shiloh was identified by Dr. Robinson* with Tana, a ruined site on the edge of the eastward arm of the Plain of Muknah. From Tana, the border "passed by on the east to Janohah," which has been identified with Yanun,† a village and ruined site on the mountain which lies on the south of Tana, and close to the easternmost head of Wady Kanah. From Yanun (Janohah,) the eastern boundary of Ephraim is carried on in Joshua xvi to Jericho and the Jordan, but its discussion is deferred, for the sake of pursuing the identification of the northern boundary from Asher-ham-Micmethah (el-Azeir in the Muknah) westward. The text of Joshua xvii, 7, 8, 9, is as follows:

"And the coast of Manasseh was from Asher to Micmethah, that lieth before Shechem; and the border went along on the right hand unto the inhabitants of En-tappuah. *Now* Manasseh had the land of Tappuah; but Tappuah on the border of Manasseh *belonged* to the children of Ephraim; and the coast descended unto the river Kanah, southward of the river. These cities of Ephraim *are* among the cities of Manasseh. The coast of Manasseh also *was* on the north side of the river, and the outgoings of it were at the sea."

Turning now to the Palestine Exploration Map, it will be found that between Ain Abus and the confluence of Wady Yasuf the Wady Kanah, here named Wady Jerrä, makes a long bend to the north, and in the bend is situated Khurbet (ruin) Tafsah. This name is taken to be a corruption of the Hebrew "Tappuah;" and the Biblical record appears to mean that the boundary, after following the Kanah from El-'Azeir (Asher) to Ain Abus, instead of going along the arc formed by the northward deflection of the Wady, strikes a chord-line across from east to west, leaving the land of Tappuah (Tafsah) "on the right hand," so that "Manasseh had the land of Tappuah;" although if the line of the Wady Kanah had been followed strictly, Tappuah would have belonged to Ephraim. Thus in agreement with the sacred text, the coast here "descended southward of the river," and these cities on the Ephraimite side, became "among the cities of Manasseh." Still the text maintains, that, "the coast of Manasseh also (or nevertheless) was (that is as a rule) on the north side of the river, and the outgoings of it were at the sea."

Lieutenant Conder, following names in the "Samaritan Chronicle" and the "Septuagint" places Tappuah at the village of Yasuf, which he says, is at the head of the Wady Kanah; ("Handbook to the Bible," p. 263). But Yasuf is really at the head of the small branch named Wady Yasuf, which joins Wady Kanah near the western end of the

* "Bib. Res." iii, 295.

† Van de Velde's "Travels," ii, 303. Robinson's "Bib. Res." iii, 297.

Tappuan chord-line. After the foregoing explanation, it seems unnecessary to carry the boundary so far south of the Kanah.

Regarding "the outgoings at the sea" Dr. Robinson has expressed the opinion that instead of the boundary of Manasseh following the river as the text implies, it proceeds probably from the point where the watercourse leaves the highland in a direct line to the sea, at or near Arsûf. (Robinson's "Phys. Geog. Holy Land," p. 100.) If this were not the case before the tribe of Dan received its allotment, there is evidence that it was so afterwards, for the Palestine Exploration Survey has discovered on the north of the Nahr-el-Auja (River Kanah) an ancient site, which is now named Tell er Rakeit, with which the Danite town of Har-Rakon or Rakkon is identified. Dr. Robinson's proposal is thus confirmed.

In support of the objections to the identification of Wady Kanah with the biblical River Kanah, two other Wadys have been proposed.

The southernmost is the Wady esh Shair, in connection with 'Ain-el-Kusab (Khassab), at its source on the north-western outskirts of Shechem, at the foot of Jebel Eslamiyeh (Mount Ebal). The meaning of Kanah is "reedy," and Kusab is held to mean the same.* The Wady esh Shair, called also Wady Zeimer, was supposed to reach the Mediterranean through Nahr-el-Falik (Falaik). But the Palestine Exploration Survey has rectified this error, and shows that the outfall is really through Nahr Iskanderuneh, formerly named Nahr Abu Zabura.

The northern competitor is Nahr-el-Akhdar, called Nahr-el-Mefjir in the Palestine Exploration Map. This outlet is the recipient of three main channels, viz: (1) Wady Abu Kaslan, rising near Yasid, six miles north of Shechem; (2) Wadyes Selhab, rising near Akabeh, 12 miles north-east of Shechem; and (3) Wady Arak, rising near Umm el Fahm, 25 miles north-west of Shechem. Both (2) and (3) may be dismissed as untenable, because they take Ephraim so far north as to leave no room for Manasseh between Ephraim and Issachar. Dothan is on the south of Wady Selhab.

In connection with both of the proposals to find the River Kanah on the north of Shechem, Yasir (Teiasir in the P.E Map) has been taken as the probable site of Asher. See Dr. Grove's note on Asher, art. Manasseh, "Smith, Bib. Dict.' ii, 520. But Yasir (Teiasir) is more than 12 miles from Shechem, and separated from it by three mountain ranges; whereas el Azeir is at the foot of Mount Gerizim (Jebel et Tor), and thus more truly "lieth before Shechem." It is, however, a curious circumstance that Teiasir is found on a Wady Mukhnawy, just as el-Aseir is on the Sahel Mukhna.' The advocates of the Wady esh Shair, have, however, a much better Asher for their purpose in Asîret el Hatab, lying at the northern base of Mount Ebal (Jebel Eslamiyeh), and in a Wady connected with Wady esh Shair. As no Tappuah, however, can be found anywhere

* This identification was proposed by Rabbi Schwarz, and Dr. Grove seems to prefer it in his article "Kanah," and also in the article "Manasseh," in Smith's "Dict. of the Bible."

north of Wady Kanah, the conclusion is in favour of that line, where it is found with the rest of the points identified. With regard to the Ephraimite city of Shechem, being found within the tribal limits of Manasseh, it may be remarked, that the parcel of land which Jacob bought at Shechem was bequeathed to Joseph, and although Manasseh was his eldest son, the patriarch Jacob's blessing fell upon Ephraim, taking effect in the elevation of Joshua, who appears to have recovered possession of Jacob's land at Shechem without a struggle ; and having made the place his capital, and the gathering place of all the tribes, it probably became a seat of his own immediate family and followers. Perhaps the extension of Manasseh south of the Kanah was a compensation to Manasseh for the Ephraimite possession of Shechem, and it may have been for the more complete satisfaction of Manasseh, that Shechem was surrendered by Ephraim, first as a city of refuge and afterwards to the Kohathite Levites. Nothing in subsequent events serves to throw any light on the Kanah as a boundary.

TRELAWNEY SAUNDERS.

NOTES ON DISPUTED POINTS.

MR. BIRCH'S papers must be regarded as of great interest to the subscribers of the Palestine Exploration Fund. I would, however, venture to defend myself against some of the objections which he has raised in the previous *Quarterly Statement.*

Tombs of the Kings (*Quarterly Statement*, 1880, p. 167). Mr. Birch objects that the site I have proposed is beyond the limits of Zion. I am, however, not aware of any direct statement in the Bible to the effect that the Kings were buried on Zion.

The Kings were buried *in* the City of David, which Mr. Birch places on Ophel. This identification appears to me improbable for several reasons. 1st. It is contrary to the account of Josephus (whose authority Mr. Birch however denies). 2nd. The wall on Ophel was not one *enclosing*, but one *outside* the City of David (2 Chronicles xxxiii, 14). 3rd. Millo was according to the LXX, the same as Akra, and was *in* the City of David. Mr. Birch must, it would seem, either remove Akra to the Ophel ridge, or must discard this ancient identification of Millo.

This question is one which of course presents difficulties or it would not have been a matter of dispute for the last half century. Theories however, which discard the evidence of Josephus and other ancient authorities may perhaps be thought to be less satisfactory than those which aim at reconciling every ancient account.

The reason why I have supposed Asa and Ahaziah not to have been buried in the tomb of David is that each is recorded to have been buried in his own sepulchre (2 Chronicles xvi, 14 ; 2 Kings ix, 28). It is

possible, however, that Mr. Birch's view is more correct, and it is also not improbable that the tomb which I have supposed to be that of the Kings contained 11 or 12 *Kokim*, as will be seen by consulting the plan published in the *Quarterly Statement* (April, 1877, p. 78).

The strength of Mr. Birch's argument lies in his appeal to the fact that Royal tombs existed on Ophel (Nehemiah iii, 16), called "the sepulchres of David." This fact cannot be denied, but as the word is used in the *plural* (קברי), and as David himself can only have occupied one sepulchre, we are forced to understand this expression as elliptical, and as meaning "sepulchres of the House of David." I have endeavoured (though perhaps too briefly) to explain in the "Handbook to the Bible" (p. 341), that these Royal sepulchres on Ophel are identical with the "field of burial of the Kings" (2 Chronicles xxvi, 23), where Uzziah was buried—a place distinct from the Royal cemetery in the City of David, and probably the same as the "garden of Uzzah" (2 Kings xxi, 18), where also Manasseh and Amon (verse 26) were buried.

This Royal Cemetery in a garden belonging to the King's house may naturally be placed on Ophel, where was the Royal garden (Nehemiah iii, 15), and the King's high house. Josephus makes the same distinction in speaking of Manasseh as having been buried in his own garden (Ant. X 3, 2), and states that, as a leper, Uzziah was excluded from the city (Ant. IX, 10–4).

That Solomon's palace stood on Ophel, is I believe, generally understood, and is rendered very clear by several passages in the Bible. To this palace the Royal garden naturally belonged, but it is equally clear from other passages that this palace was not in the City of David (1 Kings ix, 24; 2 Chronicles viii, 11). The tombs in the City of David cannot therefore, it would seem, have existed on the Ophel spur. The Royal palace seems still to have existed in the time of Nehemiah (Nehemiah iii, 25), but the usual explanation of the expression "House of David" (Nehemiah xii, 37) is, as Mr. Birch admits, that it refers to the tombs on Ophel already noticed in the same place. David probably never built any palace, but lived in the Fort of Zion, in the City of David, which according to Josephus, was the Upper City or Market.

As regards the translation "westwards to the City of David" we have the authority of Keil, and of Dr. Davidson, that this is the natural and correct rendering. I do not think that its occurrence in another passage (2 Chronicles xxii, 14), creates any serious difficulty, although in both passages, the direction is, if we speak with the precision of modern times, "south-westwards" rather than westwards.

As to the difficulty which Mr. Birch finds with regard to the procession passing from the Fountain Gate (Nehemiah xii, 37), there is little to be said. The passage is not very clear because it is so concisely worded. The general course is sufficiently certain from Siloam towards the south-east angle of the Haram, but whether the course was above the house (or tomb) of David, or whether the "going up" of the wall only were above the same, I must leave to better scholars to determine.

The questions here raised have been disputed ever since the time of Thrupp and Williams, and are of peculiar difficulty. The argument which I wish to bring forward as clearly as I am able is this :—

1. Solomon's palace was on Ophel. It was not in the City of David. Therefore the City of David was not on Ophel ; or again
2. Manasseh built a wall on Ophel. This wall was not in the City of David. Therefore the City of David was not on Ophel ; or again
3. Millo was in the City of David. Millo, according to the Jews was Akra. Therefore Millo was not Ophel.

Ingenious as is Mr. Birch's theory, it is hard to believe that the names Sion, Moriah, Akra, Ophel and Millo, all applied to the one narrow ridge, and that the larger hills of the city are not mentioned in the Bible by any distinctive name.

C. R. C.

NEW IDENTIFICATIONS.

Chephar Haammonai (Joshua xviii, 24). I have hesitated to identify this site with the ruin of *Kefr 'Ana*, north of Bethel, but when the boundary of Benjamin is laid down on the map it appears that the situation of the ruin in question agrees well with the description of the border descending southwards to Bethel (verse 13), and we thus obtain another point on a part of the line which was before not well indicated.

Jezreel (of Judah). The situation of the ancient ruin called *Sirreh* would agree well with the probable position of this town. (Joshua xv, 56.) The name is not very close, though the loss of the final L, and the change of *Zain* to *Sad* are of occasional occurrence. The ruin lies west of Juttah, (*Yuttah*), the name preceding Jezreel on the list. We may also compare the form Izar which Josephus gives for Jezreel (Ant. VIII, 13–8) in speaking of the capital of Ahab.

The Negeb. Many of the towns of Simeon may be identified with cities north of Beersheba and west of the Debir hills. The following occur close together in this district, being newly identified from the Survey Sheets with exception of the first :—

1. En Rimmon	*Umm er Rumâmîn.*
2. Ashan	*'Aseileh.*
3. Hormah	*Horân.*
4. Beth Birei	*Bîreh.*
5. Baalah	*Umm Baghleh.*
6. Etam	*'Aitûn.*
7. Madmannah	*Umm Deimneh.*
8. Sharuhen	*Tell Sherîa'h.*
9. Bethul	*Beit Leyi.*

Some of these I have already proposed in former numbers of the

Quarterly, but a comparison of the above list with the map will serve to show that they all belong to one district—the rolling chalk downs of the Negeb north of Beersheba.

C. R. C.

TOPOGRAPHY OF THE EXODUS.

The valuable and interesting paper contributed to the last number of the *Quarterly Statement* has, we may perhaps feel justified in saying, entirely destroyed the basis on which Brugsch's theory of the topography of the Exodus is founded. The following notes may, it is hoped, prove of use in connection with this important question.

I.

An important element in the consideration of the subject to which Mr. Greville Chester does not seem to allude, is the rapid formation of land, and advance of the shore line, due to the annual deposit of the Nile mud on the Mediterranean coast. The shore in the Pelusiac Bay has been proved by actual observation to be advancing seawards at the rate of 52 yards per annum, and according to the observations of Mr. Fowler, C.E., the Nile deposits no less than three millions of cubic yards of mud annually, or an area of 4 square miles added to the Delta of the river, and to the Levantine shore line. A strong current sets from the Nile mouths eastwards, and as the prevailing winds are from the north, a series of bars are formed, behind which the mud gradually consolidates into an alluvial tract, and this especially in the Pelusiac Bay, and in the vicinity of Port S'aîd, where the shoaling is a constant source of danger and expense.

Herodotus tells us that in his opinion (II, 5), all Egypt except the Theban Nome was at the time of the founding of Memphis (or some 30 centuries before the Exodus), a marshy tract, and that none of those districts which afterwards existed south of Lake Moeris (which was near Memphis) were then above water. He considers that the Nile Delta was originally a bay of the Mediterranean (II, 11), and he remarks that if the Nile had flowed into the Red Sea nothing could have prevented its being entirely filled up by the mud brought down by the river. Herodotus was apparently unaware that the Pelusiac branch of the Nile, which in his time was silted up, had in all probability actually done what he suggests, and had formed an isthmus of marshy ground with lakes dividing the Red Sea from the Mediterranean.

In the Geography of Ptolemy (about 147 A.D.), degrees of latitude are marked, and no part of the Delta is shown as being north of 31° N. Lat. whereas the land now extends 40 minutes further north. The central part of the Delta is that which appears to have formed latest, and thus while the sites of Zoan and Bubastis are found on the east, no ancient cities (so far as the map informs us) existed in the lower part of the Delta between the branches of the river.

From these considerations it becomes apparent that, in addition to the very cogent objections which Mr. Greville Chester has stated to the identification of the Yâm Suph with the great lagoon near el Gelseh, and the narrow bar which contains it with the path of the Israelites, there is this further objection--that in all probability neither the bar nor the lagoon existed at all at the early historic period of the Exodus. The old Serbonian bog has no doubt long since become dry, as the present lagoon appears also likely in time to become, and the fact pointed out by Mr. Greville Chester that the Gelseh is merely a great sand-dune is of considerable importance in confirmation of this view.

It would seem probable for the same reason that the marshes at the head of the Red Sea, now represented by the Bitter Lakes and Birket Balah, and Birket Timsah, were more extensive formerly than after the silting up of the Pelusiac branch of the Nile. It would seem strange if no account of the crossing of these marshes were traceable in the Biblical account of the Exodus.

II.

Dr. Brugsch has made out a strong case for the identification of the Land of Goshen with the Arabian Nome of Lower Egypt, south of the great city of Zoan or Tanis. But whether the Rameses of the Book of Exodus were in reality the same city as Zoan appears to be open to question. It has indeed been proposed to bring down the date of the Exodus to the time of Rameses II (Miamun), for the very reason that the city Rameses is mentioned in the Book of Exodus, and that Zoan was only known as the City of Rameses from the time of Rameses II, but this theory fails altogether to account for the fact that the "Land of Rameses" is noticed in the Bible as early as the time of Joseph (Genesis xlvii, 11), for no chronologist has endeavoured as yet to prove that the date of Jacob's descent into Egypt can have been as late as the time of Rameses II. The LXX translators, and Josephus believed the starting-point of the Exodus to have been much further south-west, and nearer to Memphis than to Zoan, and an element of uncertainty is thus introduced into the strongest part of Dr. Brugsch's theory.

Admitting however, that the identification of Zoan with the city Rameses is probable, several grave practical difficulties still remain. Dr. Brugsch has assumed that the Israelites' journey thence to Etham occupied a single day, whereas we may gather from the Bible that it took two days to reach the latter place (Exodus xii, 37, and xiii, 20), which cannot be considered absolutely identified with the site of Tell Dufneh. The third day's march (or the second according to Brugsch, who makes the first day's journey extend over 20 miles), was, he supposes, from Etham to the hill of el Gelseh, a total distance of 40 miles.

It is impossible to suppose that even when hastening from their enemies, the Israelites, with women, children, flocks and herds can have gone more than about 10 miles in a day's march, and Mr. Greville Chester, while considering the supposed Etham to have been within two days' easy

journey of Sân (or Zoan) appears to have occupied three days in travelling over the route which Brugsch supposes the Israelites to have passed over in one.

III.

If then the distances implied by Brugsch, are impossible, and if the supposed route along the sandspit was not only an unnecessary détour, but was also impossible, because no such spit then existed, it remains to inquire where did the passage of the Red Sea really occur.

The name Yam Suph, or "sea of rushes" is applied in several passages of the Bible to the Red Sea, including both the Gulf of Suez, and that of Akabah (Numbers xxxiii, 10; 1 Kings ix, 26), but the meaning of the word Suph (used elsewhere to signify the rushes of which Moses' ark was made, Exodus ii, 3), suggests that the name originally applied to a lacustrine region, or freshwater marsh, and was gradually extended to include the whole Sea.

A difficulty has arisen in explaining by natural causes the driving back of the waters of the Gulf of Suez, through the agency of an east wind, and this has furnished Dr. Brugsch with an argument in favour of his supposed identification of the "Sea of Rushes" with a lagoon where no rushes it now appears), can ever have grown. It is not, however, clear that the word used in the Hebrew (*Kadim*) is correctly rendered. It may mean simply "contrary" without reference to direction. The LXX translate it "south," and Jerome gives *urens*, or "burning," as his interpretation. An east wind would, however, affect the marshes north of the Gulf of Suez equally with the lagoon indicated by Dr. Brugsch.

If we accept the identification of Etham with Tell Dufneh as probable, the site of Migdol should be sought within 10 miles of that place, and the natural reading of the scriptural narrative (Exodus xiv, 2) would place Pi-ha-hiroth not far off, and Baalzephon within view. The words of the Biblical passage seem according to our version, and also according to the LXX rendering, to imply a change of direction or a return march, which is not easily explained, but I would venture to suggest that the word used (ישבו) might perhaps be better rendered *abide*, (from the root ישב), and in this case the topography becomes at once very easily explicable.

Pi-ha-hiroth is rendered "Entrance to the Gulfs" by Brugsch, but Gesenius derives the name from a Coptic word signifying "pastures," and this agrees well with the translation given by the LXX, επαυλεως, "farms" or "pastures."

Thus modified, the command to the Israelites would stand as follows :—

"Speak to the children of Israel that they abide and encamp before the pastures between Migdol (the watch-tower), and the sea over against Baalzephon ("the northern ridge").

The site of Migdol is as yet not well fixed. Mr. Greville Chester considers that the remains at Tell es Samût ("hillock of acacias") are too insignificant to allow of Brugsch's doubtful identification, and the site of Tell

el Hîr seems too near to Pelusium to satisfy the requirements of the Antonine Itinerary. The Baalzephon of Brugsch has also been proved an impossible identification, and no certain recovery of the name has been suggested, although the title occurs as distinguishing the god Amon in the Egyptian inscriptions. Nevertheless, there appears to be many circumstances which favour the site proposed below for the crossing of the so-called Red Sea, near the present ruin of el Kantarah.

1st. The lakes and marshes must here have presented a formidable obstacle before the silting up of the Pelusiac branch of the Nile, and must have been crossed by the Israelites, of which crossing we have no account, unless it be the passage of the Yam Suph, or Sea of Rushes, rendered Red Sea in the English Version.

2nd. The scene of the supposed crossing is within a few miles of the last station of the Israelites at Etham, agreeing with the view that the site of Pi-ha-hiroth was to be sought in this vicinity. While the fresh water of the Nile was carried down towards this district it may probably have presented good pasture land, and the rushes which grew in the Nile and formed the ark of Moses (Suph) would also no doubt be found in the swampy marshes near the Pelusiac Mouth.

3rd. The driving back of the waters of the Mediterranean near the mouth of the river would have probably formed a shallow bar at its mouth, and rendered possible the crossing of the swamps or lakes, which on this theory are supposed to have then occupied the part of the isthmus between the Mediterranean and the Gulf of Suez; and when we reflect on the account which Herodotus gives of Necho's Canal, in W. Tameilât, we are led to conclude that even in his time (11 centuries after the Exodus), the head of the Gulf of Suez was further north than it now is.

I would suggest then for the consideration of students, that the passage of the Red Sea may be supposed to have been that of the lakes near the Mediterranean, and the mouth of the Pelusiac branch of the Nile somewhere between Birket Balah and Lake Menzaleh, near the ruin of el Kantarah ("the arch").

A reference to the map published with Mr. Greville Chester's paper will show that this passage is within a day's march (10 or 12 miles) of the probable site of Etham (Tell Defneh), where presumably the Pelusiac branch formerly discharged into the Mediterranean before forming the marshy ground which now surrounds Lake Menzaleh (see *Palestine Exploration Fund Quarterly Statement*, July, 1880, p. 145.) On this map also, the spits and bars which now form the shore line of the Pelusiac Bay are clearly shown, while a comparison of various recent surveys would convince the inquirer that these shoals are ever steadily moving northwards as the Nile annually brings down the African soil to form a semi-consolidated delta, of which in the time of Moses, not a trace was as yet visible.

C. R. C.

HIDING PLACES IN CANAAN.

I.—JEREMIAH'S GIRDLE AND FARAH.

In order that the prophet might mar a new girdle (Jer. xiii, 1—11), does it not really seem a needless expenditure of time and strength for him to go twice to Euphrates when the nearest point of the river is about 400 miles distant from Jerusalem?

But how otherwise is the difficulty to be explained? "It was done only in a vision" say some; but this is most unsatisfactory, as nothing of the kind is stated in the narrative. The Speaker's Commentary, not liking the vision nor yet the long journey, states that internal evidence allows of its transporting Jeremiah for 7 years for safety to the neighbourhood of the Euphrates, so that the prophet has the long journey only at the beginning and end of his stay. An *unmentioned* visit to—with a sojourn at —the Euphrates seems however to me, as great a difficulty as the one it is meant to solve.

Grotius thinks that the girdle hidden at Euphrates represented Judah in exile at Babylon: if the Bible said so, the question, of course, would be at once settled, but as it does not, it is simply a conjecture to be taken on its own merits.

What then are we to do? Look closely at the narrative. "Take the girdle . . . . and arise, go to Euphrates, and hide it there in a hole of *the rock*." The Hebrew word for *rock* (Sela) always means a *cliff*, and the Speaker's Commentary adds that there are no cliffs by the Euphrates *near* Babylon. Accordingly if it were admitted that Jeremiah might have gone to that city, he would still have to ascend the river as far as Pylæ (a hundred miles distant) in order to find *a cliff*.

Then it has been proposed to read Ephrath or Ephrata (*i.e.*, Bethlehem) instead of Euphrates, but this requires the Hebrew letter *aleph* to have been omitted four times in this passage, a *serious* alteration in the original text, so that Gesenius rejects the suggestion.

Besides a "Sela" or cliff is not (so far as I know) to be found *quite close* to Bethlehem.

The true explanation seems to me to be simplicity itself. First, the Hebrew letters making the word "Phrath" (translated Euphrates) cannot in this case consistently with Biblical usage, mean the well known river. In addition to this passage, the word occurs just 15 times in the Bible and refers in every case to the River Euphrates, but then (be it observed) the word "river" is added in 13 instances, and in the two remaining cases the expressions are "Carchemish by Euphrates" (2 Chron. xxxv, 20), and "When thou comest to Babylon . . . . cast it into the midst of Euphrates" (Jer. li, 61—63). Thus the two places specified define what is meant by "Phrath," but in this passage we have *simply* the expression "to Euphrates" (thrice) and "by Euphrates" (once), and no mention of "*the river*" or of *any place*.

About 3 miles N.E. of Anathoth is a most picturesque spot,—a gorge between savage rocks, frequented by wild pigeons. Here a copious stream, abounding with fish, gushes forth :—altogether it is the very place for a picnic. It is called Fârah, and represents the ancient Parah of Benjamin (Josh. xviii, 23). This is undoubtedly the place to which Jeremiah was sent.

Here in the rocks we have *the cliff* required, and the identical Hebrew letters thrice translated "to Euphrates" mean also (when the points are omitted) "to Parah." The only alteration in the text needed in order to avoid the difficulties of this passage, is that to read "at Parah" instead of "by Euphrates" we must *just once* change the letter *Tau* into *He*, a very slight correction indeed.

It seems to me therefore that as Euphrates was a world-wide known name and Parah only an obscure place, accidentally or intentionally the He was by some one altered into a Tau, so that the passage became more intelligible to the ancient scribe, but most difficult to the modern critic.

W. F. Birch.

THE ROCK RIMMON AND GIBEAH.

In favour of the site *east* of Jeb'a, and in reply to Lieutenant Conder's further objection on p. 173, it may be added :

I. That the direction of the Flight was apparently *eastward*, "They chased them and trode them down with ease (unto) over against Gibeah *toward the sun-rising*." Judges xx, 43.

II. A wrong identification must not be used as an argument, and it seems to me a groundless mistake to put the battle-field at Jeb'a (Geba) "only *a mile and a-half*" or two miles from the cave, since "the men of Israel rose up out of their place and put themselves in array at Baal-tamar" (Judges xx, 33), "which Jewish tradition identifies with the large ruin 'Attâra" ("Handbook," 404), three miles north-west of Jeb'a, and nearly five miles from the cave.

The question about Geba and Gibeah, names often confused or interchanged in the Hebrew, requires notice :

(A) Geba, the priestly city (Joshua xxi, 17 ; Isaiah x, 29), apparently called Gaba in Joshua xviii, 24, and "Gibeah in the field" in Judges xx, 31, and "Geba of Benjamin," 1 Kings xv, 22, may be recognised with certainty in the present Jeb'a.

(B) Gibeah (Judges xix, 13, etc.) must have been close to the great north road, for the Levite on his way from Bethlehem to the house of God (? at Shiloh or Bethel), proposed to lodge "in Gibeah or in Ramah" (Er Ram), and "the sun went down upon them when they were by (=*close by*) Gibeah . . . and they turned aside thither" (Judges xix,

13–15). It is absurd to suppose that he went to Gebe (Jeb'a), quite out of his way, whose inhabitants ought to have been priests and not Benjamites (Judges xix, 16).

A mile beyond Tuleil el Fûl the road divides, leading in one direction towards Bethel, in the other towards Jeb'a. This is in striking agreement with Judges xx, 31, "The children of Benjamin went out against the people, and were drawn away from the city; and they began to smite of the people, and kill, as at other times, in *the highways of which one goeth up to the house of God* (i.e., *Beth-el*), *and the other to Gibeah in the field*." This statement seems to me to utterly preclude Jeb'a from being the Gibeah in question, and to require us to place the latter at or quite close to Tuleil el Fûl, independently of the favourable but unreliable statements of Josephus and Jerome. That the ambush was concealed in a cave as stated in *Quarterly Statement*, 1877, pp. 104, 105, is quite out the question, as "Israel set liers in wait *round about* Gibeah. These could easily conceal themselves in "the meadows" (*i.e.*, open plain) among the corn, four months before "the dance in the vineyards" (Judges xxi, 21). The expression "*turned aside*" (xix, 15) applies as well to Tuleil el Fûl as to Jebá, being in Hebrew identical with "*turned in*" (xviii, 3; xix, 11).

(C) *Gibeah of Saul* cannot be identical with Geba, being named along with it in Isaiah x, 29. At it there occurs among a number of cities, Lieutenant Conder's conjecture that it was a *district* and *not a city* seems to me inadmissible.

Its mention between Ramah and Gallim appears further to require it to have been visible between these two places in the panorama as seen from Geba (*Quarterly Statement*, 1878, p. 133). Thus we may identify it: (1) with *Gibeah* at Tuleil el Fûl, or (2), possibly with the hill-top south-west of Jeb'a, as there is some reason for thinking that it still bears the name of "the King's ruin."

On the assumption that "*the city*" (1 Samuel xx, 42) was the residence of both Jonathan and Saul, (2) seems to me to agree best with the story and with the mention of "*the mountain*" (Hebr. *Har.* A. V. hill) in 2 Samuel xxi, 9.

III. I certainly do understand Mr. Kerr to place Naarath on the *northern* boundary of Ephraim, and therefore must object to its being described: (1), as "the border town of Benjamin and Ephraim," and (2), as affording an indication of the line of the *northern* boundary of *Benjamin*. If I am mistaken, I shall be glad for my error to be *clearly* pointed out, as the point seems to affect the border of Benjamin.

W. F. Birch.

PHŒNICIAN INSCRIPTION IN THE POOL OF SILOAM.

A GREAT deal has been written about the Pool of Siloam, and all kinds of hypotheses have been propounded about the canal by which the water is carried from the Virgin's Fountain to the Pool of Siloam. All investigators are agreed in maintaining that it is a piece of very ancient workmanship, and many of them try to prove its connection with the waterworks made by King Hezekiah—but every theory that has hitherto been put forward regarding it has been founded on guesswork, and I had very little hope that we should ever arrive at any certainty respecting its age. An accidental occurrence has, however, led me to believe that we shall in course of time learn something definite about this aqueduct. A short time ago, one of my pupils, when climbing down the southern side of it, stumbled over the broken bits of rock and fell into the water. On rising to the surface, he discovered some marks like letters on the wall of rock. I set off with the necessary things to examine his discovery, and on thoroughly investigating the place I found beside the eastern wall of rock a very smooth level about 25 feet distant from the (southern) entrance, round which the rock stood up like a kind of frame surrounding a tablet sunk about half-an-inch below it. It appeared to be smooth and polished, whilst the rest of the rock was left quite rough. This tablet is about 2 ft. 2 ins. broad and high, but as it goes right down into the water I could not measure the height exactly. The rock rises quite 7 ft. above the tablet to the top, and opposite it, on the western side, is a niche hewn in the rock, where the maker of the tablet must have placed his lamp.

There is an inscription on the tablet consisting of 8 or 10 lines; *the letters are very small* indeed; unfortunately they are not very deeply engraved, and have become more indistinct because of a deposit of silicate that has gradually covered them in course of time; a squeeze of them on paper was therefore very inadequate: many of the letters, being somewhat different in colour, are still quite recognisable, but are not sharply enough cut to admit of an impression of them being taken. As far as I could judge the letters are Phœnician, but you must judge for yourself on that point from the squeeze.

Before we can have an exact copy, a perfect squeeze, the following measures must be resorted to. In Colonel Wilson's "Ordnance Survey Plan of Jerusalem," the depth of the Virgin's Fountain is given as 2·087 ft., and that of the present bottom of the western end of the Pool of Siloam, where the spring flows out, is also put down as 2·087 ft. This shows that the water merely flows through the canal with what it has gained from the Virgin's Fountain which generally rises to 3 ft. In Dr. Tobler's opinion, and in that of Colonel Warren ("Recovery of Jerusalem," p. 238), the canal is so low in several places (especially in the middle), that one can see that it used to be higher. "Sand, rolling stones, and mud," are to be found there. See what Colonel Warren says of his investigation of the place in the middle of the 240th page of his book. Thus one sees that the canal

has got not a little choked up with rubbish in the course of years, and that its bed is rather higher than it used to be. As the tablet with the inscription is now partially sunk in the water, which could not have been the case in the old time, it is apparent that the canal is very much filled up with broken rock, etc., in this place also. This is assuredly the case with the Pool of Siloam, through which the little stream flows. In order to lay bare the tablet with the inscription and thus get at it properly it would be necessary to employ workmen to make a ditch through the pool (so as to lower the water), either to bring it to its former level, or at any rate to make its bed 2 or 3 ft. deeper. This could easily be done, and then it might go through the dam, and by this means the canal would be emptied 10 ft. further up than where the table is. There would also be no further stoppage of the water, which would have a free course through the canal down which it would run in a stream of about an inch deep, and over it a board might be laid on which one could stand and work comfortably. Perhaps the silicate might be removed by a chemical process, and then a perfect impression could be taken of the inscription.

The work would be better done if it were done with the consent and under the direction of the municipality, and so far there are few difficulties in the way—but an outlay of about £25 (and perhaps more), would have to be made. I am quite willing to undertake the work if it is desired.

I told Dr. Chaplin about it and he told me that he would go and see it, so he will perhaps send an account of what he has seen.

As the paper used to take off the impression was partly in the water, it was quite wet, and tore in taking it off the stone.

If the surface of the water were lowered in the canal it must also be lowered in the Virgin's Fountain, and then we shall probably be able to find out where the water comes from, a matter that still remain unknown. Later on I shall send a short paper with drawings of the Pool.

C. Schick.

ZELZAH.

There is some difficulty connected with this word. The fulfilment of predicted detail was to assure Saul of the truth of Samuel's words. Many particulars are given in 1 Samuel, x, 2–5. It is said, "thou shalt find (*lit.* come upon) two men by Rachel's Sepulchre in the border of Benjamin *at Zelzah*." No such place is named elsewhere, nor has any trace of the name been found, since Beit Jala is too far distant to satisfy the conditions.

The Sp. Comm. rightly observes that the mention of any place is unnecessary, since Rachel's Sepulchre would be sufficiently well known. Accordingly for בצלצח it suggests reading בצלצלים (with cymbals). The Vulgate gives "in meridie" (towards the south), while the LXX

apparently fancying that the two men were taking severe exercise, translate the words by "ἀλλομένους μεγάλα" (leaping violently). *Overheating themselves* was, however (I think), just what they were *not* doing: rather were they studiously keeping themselves *cool*, if with a very slight alteration the true reading be בצלצור bizelzur (*under the shadow of a rock*).

Saul would easily reach Rachel's Sepulchre in an hour: in half the time, if he forced the pace to make Samuel's words untrue.

It was useless, however, to try to thwart prophecy (well for him if he had remembered it in dealing with David). Early though the hour was, he came upon the two men (1) near Rachel's Sepulchre (2), in the border of Benjamin, *i.e.*, on the *western* side of the watershed, *where in the morning there was some shade*, and (3) under the shadow of a *rock* (tzur) which probably could hardly have sheltered them later in the day.

W. F. Birch.

THE NAMELESS CITY.

The new map enables me to correct some errors in the description of the Bakoosh hill given in *Quarterly Statement*, 1879, p. 130. The hill is west-north-west, not south-west of Solomon's Pools, and is marked on the map as *wooded*. On the map "S" in "A-Sâleh" must, I believe, be close to the spot where Samuel anointed Saul.

Perhaps some one at Jerusalem will kindly test the view as to whether it takes in (1) Rachel's Sepulchre; (2), Jebel Deir Abu Thôr, or else the hill just above the Montefiore almshouses; (3), part of the "Upper City" of Jerusalem; and (4), the Mount of Olives.

It would be interesting also to learn whether the sepulchre ("Byeways," p. 437) is *ancient Jewish:* if so, in case others can also be found, we certainly have here "*a nameless city.*"

"Dahar es Salâhh" seems to be a name for the mountain ridge in general, and "Ras Sherifeh" (as the name shows) for the highest point.

I further find that Ain Kasees instead of being north or north-east of the hill, is at the head of a valley on the south side of it. About a quarter of a mile from the spring, and close to the top of the ridge, are ruins "distinguished by ponderous rabbeted stones" called "Khirbet el Kasees" (Finn) or "Kh. el Jâmia" (map). Assuming the hill to be Ramah, we perhaps ought to put "the high place" here instead of at Râs Sherifeh, only 21 feet higher, though half-a-mile further off, as the Memoirs seems to forbid our claiming a sufficiently high antiquity for the existing surface remains, so as to build any argument upon them. W. F. B.

RACHEL'S SEPULCHRE.

To avoid the difficulty about Ramah, one writer has placed Rachel's Sepulchre *north* of Jerusalem.

The site, however, at Kubbet Rahil marked out by common tradition agrees well with Genesis xxxv, 16. "They journeyed from Bethel, and there was but *a little way* (Chabrah) to come to Ephrath," which is Bethlehem. This term has been rated as high as *four miles*, but as (2 Kings v, 19) Gehazi being pressed for time, could hardly afford to give Naaman so much start, a mile is more than sufficient, so that the accepted site may be regarded as practically correct.

The punishment of Gehazi, as well as Elisha's death and tomb, ought (it seems to me) to be put at Abel-Meholah. Then "the Ophel" (A.V. tower, 2 Kings v, 24) would be one of the adjacent Tells in the Jordan Valley. W. F. B.

PALESTINE—AS IT IS, AND AS IT MIGHT BE.

Extracted from a Letter to the "Times."

"1. Nothing can well exceed the desolateness of much of it. Treeless it is for 20 or 30 miles together, forests which did exist 30 years ago (*e.g* on Mount Carmel and Mount Tabor) fast disappearing, rich plains of the finest garden soil asking to be cultivated, at best but scratched up a few inches deep in patches, with no hedges or boundaries, mountain terraces natural, or artificially formed, ready to be planted with vines, as the German colony are doing at the foot of Mount Carmel; the villages nothing but mud huts, dust, dirt, and squalor; the inhabitants with scarce clothing enough for decency, their houses—ovens; large tracts without a horse or cow, sheep or dog; no pretence at roads except from Jaffa to Jerusalem, and this like a cart road over a ploughed field, the rest at best like sheep-walks on the Downs of Sussex, but for far the most part like the dry bed of the most rocky river, where amid blocks of stone each makes his way at a footpace as best he can, or on smooth, sloping rocks or over loose stones thrown down from the old walls on either side, which no one offers a finger to remove; nothing upon wheels, not so much as a barrow, to be met with in a ride of over 300 miles.

"2. Everything is taxed: every fruit-tree, so none now are planted; every cow or horse, &c.; every vegetable sold out of a private garden. Every eighth egg is not taxed but taken by the Government. In some places the taxes of the district are sold to the highest bidder. The farmer is unable to sell a measure of his corn till all has been collected into a

heap and the tax collector has set his sum upon it, from which there is no appeal. Double taxes are expected this year, because after three years of scarceness the harvest promises to be abundant.

"3. Nothing like a small farmhouse is to be found far or near. If there were, the owner is liable to have soldiers or revenue officers quartered upon him, to be boarded and lodged at his expense. The towns are filthy in the extreme, none more so than Jerusalem itself, where, however, taxes are levied from every house for lighting and cleaning the streets, while a sprained ankle or a splash into a hole of blackest dirt is sure to be the result of a momentary carelessness.

"4. Nothing is done for the good or improvement of the people, or the land, by the Government. Not only so, but every offer, and I heard of several made by private individuals or by companies, is at once refused, or refused unless a bribe be first given to the authorities.

"This is a picture, I believe, in no way overdrawn, of that land which was once "flowing with milk and honey." What might it not become again with fair usage and good government? But there is no hope for Palestine while it remains in the hands of its present rulers.

"One result of the British occupation of Cyprus already is to make even Mahomedans, I was told, both in Egypt and in Palestine, hope that the same bright day of better things might dawn upon them.

"Palestine is worthless to the Turkish Government. The whole revenue is stated to amount only to £180,000 or £200,000 per annum. Capitalize this at 5 per cent., and it comes to but four millions of money. If it were six, or even 10 millions, what would that be for Europe to raise for the purchase of Palestine? A sum sure to be repaid a thousand-fold in a few years' time. And what would not 10 millions in hard cash be to the Turkish Government at this moment? For 150 years India was admirably governed by the Old East India Company. Palestine, compared with India, is as one of the smallest counties compared with the whole of England. Blessed indeed will that Power surely be which shall first move to establish some such international company for the purchase and government of Palestine—not seeking in anywise its own aggrandizement, but perhaps, thus fulfilling in a way beyond what is ordinary or common, our daily prayer, 'Thy will be done in Earth as it is in Heaven,' for 'Jerusalem shall be trodden down of the Gentiles until the times of the Gentiles be fulfilled.'

"W. J. Stracey."

LIMITS OF ERROR IN LATITUDES AND LONGITUDES OF PLACES OBTAINED DURING THE RECONNAISSANCES MADE IN PALESTINE.

By Lieut.-Col. Warren, R.E.

The recent publication of the Trigonometrical Survey of Palestine affords an opportunity, which but rarely occurs, of rigidly testing the accuracy of a Reconnaissance of a district, previously made; and as the limit of error over extended areas, attainable under such circumstances, is a matter of general interest to persons interested in the mapping of the country around Palestine, I give a few notes I have made on the subject.

Previous to 1865 the maps of Palestine presented but a very inadequate idea of either the absolute or relative positions of places, and though several additions had been made from time to time very little apparent improvement was made in the maps until after that date.

In 1865-6 Major (then Lieutenant) Anderson, with a base, obtained astronomically, made a Reconnaissance of the watershed of Western Palestine and the district about the Sea of Galilee, giving a table of latitudes and longitudes of about 50 astronomical stations.

In 1867, I made a Reconnaissance of the plain of Philistia, valley of the Jordan and land of Gilead, giving a table of latitudes and longitudes of about 200 places in the plain of Philistia, of which about 20 were astronomical stations. In prosecuting this work, however, I came to the conclusion that a Reconnaissance, even of the most accurate description, would be insufficient for the wants of the biblical student, and I strongly urged the commencement of a trigonometrical survey—a work which has now been so successfully carried out and completed by Lieutenants Conder and Kitchener.

These tables of latitudes and longitudes as obtained by Lieutenant Anderson and myself (see P. E. F. Quarterlies, 1869, p. 74, 1871, p. 162) I have tested with those obtained from the Trigonometrical Survey sheets, but before giving the results it is necessary to point out that while I have assumed my longitude east of Greenwich from the same point as the Trigonometrical Survey, viz.:—point at Jaffa on Admiralty chart, Lieutenant Anderson takes his from the Dome of the Rock at Jerusalem, as obtained by Commander Maunsell from the said Admiralty point at Jaffa.

An analysis will therefore be useless unless it is ascertained whether there is any discrepancy between the longitude assumed by Lieutenant Anderson of the Dome of the Rock and that which I obtained myself from Jaffa.

The following comparison will show that there is a discrepancy between the longitudes of the Dome of the Rock as obtained by Commander Maunsell and myself (from the same point at Jaffa) and that while I only exceed the longitude given on the Trigonometrical Survey by 11 seconds, his observation exceeds it by 55 seconds.

Comparison of Results.

	Latitude N.			Error.		Longitude E.			Error.	
	°	′	″	′	″	°	′	″	′	″
Admiralty—1855.. ..	31	46	38	− 0	6	35	18	57	+ 5	10
Doergens	31	46	56	+ 0	12	35	18	30	+ 4	43
Collier's Map	31	47	43	+ 0	59	35	15	47	+ 2	0
Van de Velde	31	46	50	+ 0	6	35	14	42	+ 0	55
Maunsell—1862	31	46	39	− 0	5	35	14	42	+ 0	55
Anderson—1865	31	46	47	+ 0	3	35	14	37	+ 0	50
Berghaus—1838	31	46	45	+ 0	1	35	14	8	+ 0	21
Warren—1867	31	46	41	− 0	3	35	13	58	+ 0	11
Trig. Survey	31	46	44	..		35	13	47	..	
Captain Corry	31	46	49	+ 0	5	35	13	18	− 0	29

I assume that the Trigonometrical Survey sheets must be rigidly correct to at least 2″ of longitude, and therefore it appears that Maunsell's longitude is in excess by 55 seconds, and consequently Lieutenant Anderson's work about Galilee must be corrected to this extent throughout; when this is done I find a general agreement in the comparative accuracy of all the Reconnaissance sheets, the errors averaging closely the same in each, it will therefore suffice if I describe that of Philistia alone as an example.

This work extended from Jaffa on the north to Gaza on the south, about 38 miles; from Gaza on the west to Jerusalem on the east, about 45 miles.

I was occupied from 1st to 26th June, 1867; and in addition to the topographical details and observations for latitude and longitude, had to arrange for the taking of about 30 photographs of ancient sites, to examine the architectural remains, measure the ruins, and search out biblical sites.

My instruments consisted of an 8-inch sextant and artificial horizon, 5-inch theodolite, 3 pocket chronometers, pocket compass and aneroid barometers.

The system was briefly as follows, in principle:—To ascertain latitude at each camp by observation of the stars, and to obtain a true azimuthal angle from camp to camp. This would fix each camp on the earth's surface, and the distance from camp to camp was used as a base line from which points on each side would be obtained.

In practice the work was not quite so simple, for the camp could never be placed on the positions from whence azimuth angles would be taken with the theodolite, and neither of the observations would be taken very close to the villages.

The extreme limit of error in latitude as obtained by the 8-inch sextant I consider to be 10 seconds of arc, and in longitude as obtained by azimuth angles with 5-inch theodolite about 10 seconds in 60 miles: but though the positions from whence observations on hill tops could be taken should be thus close I do not think that the villages themselves, which are often 10 seconds in extent, could be fixed within 20 seconds of this correct position.

I have therefore taken 20 seconds of arc both of latitude and longitude to be the limit of error within which the *principal* towns should be fixed, and in order to facilitate a comparison I have classified the results and find that out of 134 stations and conspicuous points, of which I have given the latitudes and longitudes (obtained from about 20 astronomical observations),

60 (containing all the principal points except four) are within the limits of 20 seconds latitude and longitude.

29 are within 35 seconds.

45 minor points are beyond this.

Now on looking at these minor points I find that they are for the most part small villages lying in hollows in the plains, which cannot be recognised or seen from the surrounding hills, and could only be fixed by a series of compass observations, on the other hand I find that all the principal points are well placed, as will be seen by the accompanying list marked A.

COMPARISON. (A)

	Latitudes.		Error.	Longitudes.		Error.
	° ′ ″	° ′ ″	′ ″	° ′ ″	° ′ ″	′ ″
El Muntâr ..	31 29 25	31 29 17	−0 8	34 28 5	34 28 19	+0 **14**
Gaza (highest minaret) ..	31 30 15	31 30 18	+0 3	34 27 37	34 27 51	+0 **14**
Sheikh Ali ..	32 10	32 33	+0 23	52 50	53 20	+0 **30**
Tel ed Dewar..	33 53	33 56	+0 3	50 40	50 25	−0 15
Kubeibeh ..	34 20	34 18	−0 2	51 0	50 52	−0 8
Mar Hanneh ..	35 33	35 48	+0 5	53 35	53 50	+0 15
Arak Menshiyeh	36 45	36 59	+0 15	46 50	47 32	+0 42
Beit Jibrîn ..	36 25	36 44	+0 19	53 35	54 15	+0 40
Tel Bulnard ..	37 50	38 3	+0 13	52 27	52 28	+0 1
Askulan ..	39 50	39 53	+0 3	32 20	32 38	+0 18
Berkusia ..	40 33	40 49	+0 16	49 12	49 40	+0 28
D. Dubban ..	40 25	40 34	+0 9	53 15	53 35	+0 20
Shuwaikeh ..	40 50	41 3	+0 13	58 23	58 5	−0 18
Beit Netîf ..	41 46	41 40	−0 6	59 25	59 40	+0 15
Tibneh.. ..	44 38	44 34	−0 4	55 50	55 30	−0 20
Deir Aban ..	44 36	44 32	+0 4	35 0 22	35 0 28	+0 6
Beit Atab ..	44 0	44 4	+0 4	2 55	3 4	+0 9
Esdûd ..	45 20	45 18	+0 2	34 39 20	34 39 41	+0 21
Deir el Howa..	45 6	45 10	+0 4	1 55	35 2 7	+0 12
Dome of Rock	46 44	46 41	−0 3	35 13 47	13 58	+0 11
Surah	46 34	46 36	+0 2	34 58 44	34 59 3	+0 19
Beshît.. ..	49 20	49 25	..	44 45	44 20	−0 25
Kutreh ..	49 20	44 32	+0 12	46 20	46 38	−0 18
Saidan.. ..	50 35	50 30	−0 5	54 0	54 12	+0 12
Musa Thalia ..	50 33	50 28	+0 5	55 33	55 45	+0 12
Akîr	51 33	51 27	−0 6	48 56	49 18	+0 22
Abu Shusheh ..	51 28	51 35	+0 7	54 40	55 2	+0 22
Yebneh ..	52 0	52 14	+0 14	44 30	44 32	+0 2
Nianeh ..	52 10	52 12	+0 2	52 15	52 23	+0 8
Zernuka ..	52 49	53 11	+0 22	47 0	46 55	−0 5
Yebneh port ..	55 15	54 45	−0 3	41 50	41 32	−0 18
Ramleh ..	55 35	55 21	+0 14	52 0	52 1	+0 1
Nely Samwil ..	50 3	49 50	−0 13	35 10 28	35 10 45	+0 17
Tuliel el Ful ..	49 27	49 15	−0 12	13 30	13 50	−0 20

I am doubtful whether the great accuracy and rapidity of this class of work has yet been recognised by any section of thinking men. The best features of the work are that it cannot get out to any great extent, so that it may be carried for hundreds of miles with the same limit of error. For example, the extreme points in this Reconnaissance are Jerusalem and Gaza. In each of these cases the limit of error in latitude is 3 seconds, and in longitude respectively 11 and 13 seconds. I am not aware that there is any record of so large a number of points being accurately fixed over so extended a tract in so short a time ; the average day's work included the surveying from 50 to 70 square miles, and fixing the latitude and longitude of eight places.

The accuracy of this Reconnaissance was so little comprehended ten years ago that when I brought it forward it was distrusted because it was so unlike all the work that had been done before. At that time I asserted positively that Maunsell's longitude of the Dome of the Rock was nearly a minute too far to the west, and published my longitude in the P.E.F. Quarterly, 1871, p. 162, but finding that the former longitude was preferred to mine, I said I should be content to wait for the Trigonometrical Survey to decide between us, which it has now done in my favour.

THE SULPHUR OF THE VALLEY OF THE JORDAN.

(*From the Zeitschrift of the German Palestine Association.*)

By Dr. Oscar Fraas.

Some time ago I received an account from Herr Charles Paulus, sen., of the sulphur found in the Jordan Valley, which confirmed the result of observations previously made. Herr Paulus writes that some young men of the Temple Colony in Jerusalem made an excursion to the Dead Sea in the spring, and brought back with them "some specimens of a mineral substance they had found there. These specimens consist of a fine grey clay containing sulphur. The clay itself is good pottery clay, such as is found, not only in the neighbourhood of the Dead Sea, but which also exists in great quantities all over the chalk mountains of Palestine. . . .

"This sulphur consists for the most part of roundish lumps varying from the size of a pea to that of a walnut ; it is of a whitey yellow colour, earthy, very brittle and apt to lose its colour. Each of these sulphur balls is enclosed in a larger kidney-shaped lump of clay that forms as it were the shell containing the sulphur kernel. The clay in which small crystals are to be found, dissolves in water. Sulphur was also discovered in the cracks in the larger crystals (calcareous spar ?).

"The sulphur ground lies from 1 to 2 km. distant from the right bank of the Jordan, and a short German mile from the Dead Sea ; its surface is in some places flat and in others hilly. Several of these heights rise 100 feet above the level of the plain. The sulphur ground stretches out towards

the north, but how far is as yet unknown. The travellers thought it extended as far as they could see. The air is pervaded by a sulphurous smell, which indeed clung to the specimens brought to me. All vegetation ceases in this ground. A slow combustion is apparently going on in the air during the normal state of the temperature, and is betrayed by the smell. The friable earthy character of the mineral forbids the assumption that it had been brought down by means of water from some distant place as for instance, from the volcanic region of Hawrah ; it is far more probable that the sulphur was thrown up in the very spot where it now lies, or, at least, was brought from somewhere in the immediate neighbourhood by an irruption of mud."

Robinson mentions the sulphur collected by the Jehalin Bedaween, for the purpose of making gunpowder at the northern end of the Dead Sea in his Palestine II, pp. 454, 469, and III, p. 8. Herr Schick, to whom I applied for further information on the subject in 1865, wrote that Herrn Palmer and Schneller were of opinion that no real sulphur was to be found at the Dead Sea, but that they had picked up some whitey coloured sulphur amongst the hills to the north of the sea which surround the bed of the Jordan and lie at a good quarter of an hour's distance from the bank. They considered that these hills were raised by the action of water, and left it an open question where the sulphur came from and how it got there. Herr Schick went on to say that the hills seemed to him like the bank of an old lake or river, for the ground below them was 30 or more feet lower than the terrace on the other, or western side of the hills. Thus the hills were hills when regarded from the east, while, when seen from the west they were on a level with the plain. The sulphur was formed at the edge of the dried up watercourse.

Ten years later, in December, 1875, I received a box from Herr O. Kersten containing, amongst other things, some specimens of oolitic sulphur from "Khan Hadjla." Now as "Kalaat Hadjla" is placed by Lortet in his map half way between Riha and the northern end of the sea, it must undoubtedly be the same place as that described by Herr Schick and Herr Paulus.

Herr Paulus maintains that this sulphur cannot have originated in sulphur springs, because each lump is enclosed in a shell of clay, and because there are no sulphur springs on the right bank of the Jordan. There are such springs on the left side of the river, but he does not see how the sulphur could get across the water to the right side ; unless, indeed, it be maintained that the Jordan ran formerly in a more westerly direction, which is not impossible, but then, in that case more sulphur would have been found on the right bank, and also near the springs where it is unknown. Herr Paulus goes on to connect the presence of the sulphur with a volcanic irruption in the Jordan Valley, and ascribes it to that convulsion of nature which caused the destruction of Sodom and Gomorrah.

I have geological reasons for denying the volcanic origin of the sulphur most emphatically. It is true that there is a volcanic sulphur generated

in the craters of volcanoes and by subterranean fire. But such sulphur can only be regarded as the direct or indirect sublimate of pure sulphur already in existence, or of such combinations as decompose thereinto at a high temperature. Sulphur, like phosphorus, is a *product of the organic world*, of the vegetable as well as the animal world. Still plants do not possess nearly so much sulphur as animals. Wherever organic bodies have been decomposed in great numbers, as for instance in old sewers and such like excavations, sulphur crystals have been found. Sulphur chiefly appears in the later formations of the earth, viz., in the tertiary, because there was a greater mass of organic remains during that period than before. It is there found in combination with clay and gypsum. Gergenti in Sicily, Conil near Cadiz and Ternel in Aragon are rich in sulphur. The tertiary slime of Radoboj in Croatia, celebrated for its fossil plants, insects, and snails, is full of yellow and brown sulphur. In other places where sulphur is found, as for example, in the neighbourhood of Jebel Zeit, there is in addition to decomposed animal and vegetable matter, bitumen, rock oil, and asphalt, or again in contact a decomposition of gypsum and other salts of sulphuric acid.

The origin of the sulphur indigenous to Hadjla is the same as this. A few kilometers to the west of this place is Nebeg Musa with its well-known Moses Stone, a calcareo bituminous stone cut and carved by the Bethlehemites. Bitumen and asphalt extend from Mount Quanantanca to Rasel-Feshka into the old chalk strata, and the waters which have been and are collected there become, through the decomposition of the bitumen, sulphur springs, such as are of frequent occurrence on the eastern side. One will not be far from the truth if one concludes that the oolitic earthy sulphur of Hadjla originated in old dried-up sulphur springs. The theory just propounded by Herr Paulus, and then dismissed, in consequence of his prepossession in favour of the volcanic origin of the sulphur is certainly correct. The clay shell surrounding the sulphur is a proof of this origin, for the water that decomposed the bitumen washed the clay out of the bituminous chalky marl with which it was incorporated, after which it clung to the sulphur thrown off by the spring. The fact that there are no sulphur springs to the right of the Jordan at the present day is no disproof of this, nor yet that the springs on the left side of the river have not a sulphur deposit, such as is to be seen at Hadjla. The precipitates of springs and deposits they may form are in a great measure dependent on factors, such for example, as the presence of free carbonic acid in the water, which lying beyond human reckoning, are rooted in minute chemical processes.*

* While this paper was in the press, I received a small bag of the sulphur in question from Herr Chr. Paulus, an exact analysis of which proves the truth of my conjecture. Professor Bronner undertook to make a chemical analysis of one of these pieces of sulphur, and his report is as follows: "The substance does not consist simply of sulphur and gypsum as it appears to do. It is rather a combination of sulphur, carbonate of calcium and gypsum, with smaller quantities of sulphite of calcium, silicate of aluminium (clay) and boracic acid.

NOTES ON A JOURNEY TO MOAB.

(*From the Zeitschrift of the German Palestine Association.*)

By the Rev. F. A. Klein.

January 30*th*, 1872.—After waiting in vain for Sma'in, Sheikh of the Ta'amireh Bedaween, who was to have been our guide to Kerek, we at length set out from Jerusalem without him. He did not overtake us until we had got beyond Bethlehem. We now refused to have anything to do with him, as we had determined to obtain an escort to Kerek from some other Sheikh. Sma'in and his people, however, followed at our heels in true Bedaway fashion, shouting and talking. They told us that they had a short time before guided a party of German travellers consisting of three persons, with their cook and servant, on a six days' excursion to Engedi, &c., for 500 piastres. Sheikh Hamza, a cunning old fellow, who usually negotiates all business arrangements between travellers and the Bedaween, came to see us at Hebron. He made himself extremely agreeable, as from the number of travellers, tents, and servants, and from the amount of luggage, he augured a rich harvest for his people. The Ta'amire Arabs had accompanied us in spite of our remonstrances, and were now encamped quite close to us in hopes of obtaining provisions. They received a satisfactory amount of food, and after getting a good backsheesh in return for having formed our guard of honour, a kindness we could have dispensed with, they withdrew muttering and shouting, but fortunately without having come to blows, a consummation we had greatly feared. As we had to pass through the country of the Jehalin, Hamza sent a messenger that very night to the chief of that tribe to engage him as our guide for the following day. The Jehalin encampment was not far from ours. A terrific storm arose during the night, which tore our flag to tatters, and threatened to blow down the tents.

January 31*st*.—Abu Dahuk did not appear. Hamza, who was half Bedawi, half Fellah, and possessed a touch of town breeding, tried all the morning to get the making of the contract for our guidance into his own hands. Our party numbered seven Europeans, an Arab dragoman, a cook, two servants and several muleteers. He promised to satisfy all the demands of the Bedaween, through whose territory we passed, for £10 a-day. Another negotiator appeared in the person of a son-in-law of the Sheikh of Kerak,

Besides these, it contains iron, magnesia, soda and chlorine. It seems to me an undoubted fact that this sulphur *originated in a mineral water which contained a solution of sulphuretted hydrogen and bicarbonate of calcium*. When exposed to the air, deposits of sulphur and carbonate of calcium were formed. But as is well known, the former when thus exposed, gradually takes the form of flowers of sulphur and is dissipated as sulphuric acid. I have convinced myself that acidulated flowers of sulphur, together with sulphuric acid, contain some sulphurous acid. When carbonate of calcium is found mixed with sulphur, it is unnecessary to say that gypsum, and previously to that, sulphite of calcium, must have been formed. But as the last named salt represents the transition stage to gypsum, it is clear that it can only have been present in small quantities.

who offered to arrange everything for £5 a-day. Abu Dahuk joined us quietly in the afternoon. He was accompanied by his uncle, a pleasant-looking old man with a white beard. The nephew was a most extraordinary looking figure, and both were patriarchally naïf. After a long palaver, a contract was at length drawn up, sealed in all legal form with Hamza's signet, and given the proper finger pressure by old Abu Salame and Abu Dahuk. After a short hand-to-hand conflict between Sma'in's band and the Jehalin, all was settled, the conquered took their departure, and the conquerors encamped round us for our protection.

February 1*st*.—On leaving Hebron, we did not go past Kumul as we had at first intended, but struck into the direct road to Engedi. Barley patches were sown here and there on the hill sides, and the grain had begun to sprout. The road was rather muddy in consequence of the heavy rain that had fallen on the previous night. A village called Beny Na'im lay at a short distance to the left of our route. There is a Makam there, sacred to the Neby Sut. Farther on we passed a ruin, Khurbet Yakin. Besides this, the following ruins lay at a longer or shorter distance from our road: Zig, Umm Halaseh, Umm-ed-Dakakin (mother of shops), Zatut, and Umm Ghuzulat. We pitched our tents in a small plain sheltered by hills, close to the latter place, and about 15 minutes from an old tank called Serwal. During our journey, we had noticed a good many traces of former buildings, and a road marked out at each side with large rough stones (like the one at Amman). A little farther down the valley, the black tents of some Ka'abneh Bedaween were visible. We paid them a visit. According to the Bedaween, Ka'abneh is derived from "Ka'aba," and they got this name because their forefathers took a prominent part in building the Ka'aba (?) We also found some Ta'amire Bedaween, whom Sma'in had sent on here with provisions (small bags of flour), and who had now received counter-orders from him. It is really remarkable how quickly and securely the Bedawig Sheikhs can despatch messages, and carry out their plans in this uninhabited district, and also how the Bedaween can find their way through this labyrinth of hills and valleys.

February 2*nd*.—Dark storm-clouds announced a disagreeable day for travelling. Rain fell, but not heavily. We started at 10.15. The hills round about us were very striking in their fantastic shapes and colouring. A pointed hill we passed bears the name of Jebel-el-Bokrosiyeh. The road ran through a valley, narrow at first, but growing wider as we advanced, and called Wady Abu-l-Hargat (Valley of the Father of the Snakes); passed Jebel Muntar, and later on Jebel Dehiyeh. We passed in succession, Wady Mudabbah-el-Bakar (cattle slaughter valley), Wady el-Ghar, and Wady Dalal, and soon came to the romantically beautiful gathering of rocks, Nakl 'Ain-Jidy. We reached Engedi at 4.15, and pitched our tents there. We found some of the Rasha'ideh Bedaween watching their crops near the spring. Their camp was at Thekoa. Acacias covered the little plain, from which we had a splendid view of the Dead Sea and the Moabite mountains opposite. There were many caves

in the rocks. During the night the Jehalin and Rasha'ideh Bedaween performed a fantasia together. Abu Dahuk's people joined us in the Wady Abu-l-Hargat. They were wild-looking, poorly clothed, and small in stature, carried their provisions on their backs (small skins of flour), and were armed with matchlocks. They leaped from rock to rock with the agility of gazelles.

February 3rd.—The sky was very cloudy in the morning, and some rain fell. The name of the valley in which we had pitched our tents was Wady Sudeir. The mountain overhanging it was called Jebel Ṣudeir (probably from the Sudeir or thorn-trees that abound in this place). The Wady begins at the rising ground (tal'at), ed-Dawa'ireh, at Ras-el-Muchawwama. We resumed our journey at 12.30. At 12.37, we crossed the bed of the Wady-el-Ghar, the upper part of which the 'Oreijeh (not "Arayeh," as Van de Velde writes it), flows. At 2 o'clock, we passed the Khabra (not "Chuberah," as Van de Velde spells it), in a little plain covered with acacia-trees. At 2.40, we reached Wady Mahras. A large ruin, Keryatein, is said to be far up, at the entrance of this valley. We got to Wady Seyal at 3.20, and then went up Wady Nimriyeh (Valley of Leopards). About half-an-hour later, we saw opposite us the fortress of Sebbe, the ancient Masada. The tents were pitched here. The sky was cloudy, and there were showers now and then. The sea was somewhat rough. The songs of the Bedaween mingled with these sounds.

Our old Sheikh Salame told me, that when a young man, he had often gone on foot from Wady Mubagghek (s.p. 9), to Mazra'a, on the other side of the sea, and that the water only came up to his ankles; but it would be impossible for any one to cross now. The Jehalin often collect asphalt (hummer), at the Dead Sea, and afterwards sell it in Jerusalem for about 500 piastres per camel's load. Amongst the Jehalin, a bridegroom pays, according as he is rich or poor, from one to five camels (1,000—5,000 piastres), for his bride. The marriage customs are much the same amongst the Bedaween, as amongst the Fellaheen. Eight days before the wedding, the fantasia is performed. The Katib is present on the marriage evening to draw out the contract. At night, the bridegroom goes into the bride's tent. Then early next morning, as Salame told me, he rushes out of the tent ashamed (جباص) and hides himself behind a rock or a bush, until his friends come to fetch him. Names of the Bedaween, Mohammed, Suleiman, Mustafa, etc. Besides these, other names were given us to-day which commemorate some occurrence. For example, my young guide to Sebbeh was called Ghadir (pond), because he had been born beside a pond. As a proof of the inherent love of theft which obtains amongst the Bedaween, Salame told me that he and a number of his people had once gone on a 60 days' journey to Hejas, to steal camels, and that their raid was successful. Nothing makes a Bedawi so happy as the enjoyment of stolen goods.

February 5th.—We left our camping place at Seyal (opposite Sebbeh) at 7.35 in the morning. The sky was rather cloudy, the air pleasantly warm. At a quarter of an hour's distance further south we come to two distinct

water courses for carrying off the water which was collected at Sebbe during rain. A small treeless plain. The Bedaween get salt from here. 8.15. Wady el Kattar (or Kaddar?). 8.30. Wady Hafhaf. 9. Jebel Sinnin and Nakb Sinnin. In going up Wady Sinnin the following ruins are passed: Umm Rokba, Khurbet et-Tayib, Khurbet el Bayut, Kurbet el Keryatein, Kurbet el Jemby (written Jenby), el Mirkez. 9.15. Rabad el Jamus (Buffalo camp). From here a pointed hill is to be seen far away to the south, on which is situated Neby Barun, a holy place to which pilgrimages are made. Any Bedawi who may see the sacred place from here lays a stone on some rock as a sign of his presence and of his respect. Thus we found quite a heap of stones. I found little cairns of this kind at Engedi; they were erected in honour of the Neby Dawa'irsh. There are many such on the Scopus, that have been heaped up by pilgrims when they first caught sight of Jerusalem. At 10, Wady el-Kedr. This valley is called Wady en-nusurah (vale of Eagles) farther on. From 10 to 10.40, we were climbing over Mersed (wait?) a steep, abrupt promontory whose sides often sank precipitously into the waters of the sea. An excellent place for robbers to lie in wait for travellers and cut off their escape. Immediately after we had crossed this promontory, we came to Wady Hatura, in which there is a little plain. At 11 o'clock Wady Mubagghek (also spelt Umm Bagghek), on each side of which are the remains of small forts. It is a romantic-looking valley with sparkling springs, trees and bushes. At 11.45 we left Mubagghek and got to Wady Nejd at 12.30., at 1 we reached Wady Zuweira and at 1.30, we came to the foot of the salt mountain, Jebel Uselum. We encamped there in a small plain covered with acacias.

February 6th.—We started at 6 in the morning and got to Rujm el-Muzoghal (stone-heaps of Muzoghal) at 6.30. A terrific storm of rain and thunder came on. At 7.20 we came to a large cave, in which we took refuge from the heavy rain. We were able to continue our ride at 8 o'clock. We reached the Sabsha, a dreadful morass at the southern end of the Dead Sea, through which the animals made their way with difficulty. There is no vegetation there, for the ground is impregnated with salt. To the south of Jebel Usdum is a pass, called by the Sheikh Nakb el-Am'az. We reached Wady-el-Milh (valley of salt) at 9.10. We had to wait there for a long time till the mules came up. Got to a stream with very little water in it in Wady-el-Ghor at 10.10. At 11 o'clock we reached Ghor-es-Safiyeh, "clear, bright," probably so called to show the contrast between its sweet waters and vegetation and the salt unfruitful ground near it. A troop of Bedaween armed with muskets, sabres, spears and clubs rushed out of the bushes and fell upon our people. One of our men was knocked down and wounded. Wild gesticulations and shouts ensued. The band, amongst whom we particularly noticed a strong, brown, naked fellow, was, as we were told, composed of Beny "Atiyeh and Beny Ma'az Bedaween from the neighbourhood of Hedjaz. After a long palaver we came to terms and resumed our journey, surrounded by the wild horde. We passed through a dense thicket and under great trees on our way to the camping place.

'Obeid, Sheikh of the Beny 'Atiyeh came to see us, he was very friendly and assured us that he would have guided us from Hebron himself if we had written to him. The guns that had been taken from our people were restored, but poor old Salame refused to be comforted regarding the indignity that had been put upon him.

At Ghor es-Safiyeh I was told of the following places which lie from west to east. Nakb el-Buweib, Wady el-Fikra, 'Ain-el-'Arus, Wady-el-Jeb, ed-Dabbeh, Hasal Madara. We found the stubble of the last harvest of dura (millet) in Ghores-Safügeh together with a little fresh green, and there were also a number of nice-looking cows, sheep, goats and lambs.

February 7th.—The Jahalin had kept up watch-fires round our camp all night and had remained awhile shouting at intervals to protect us from robbery. It was "a wall of fire round about" (Zechariah ii, 5,)—After a long palaver, four men agreed to show us the country in the immediate neighbourhood for 109 piastres. We left our encampment at 10.10 and wandered amongst the brushwood and trees until we came to some fields in which the barley had began to show green. The fields were irrigated by water brought from the Safiyeh. Half-an-hour later we reached the ruin of Sheikh 'Isa. We found the remains of walls, pillars and doorways, and many huge blocks of red sandstone, amongst which was a carved stone of about 2 feet long with a cross, &c., on it ; besides these there were tubes for conducting water and the remains of a Khan, with a great gate. Within the Khan, several human skeletons and rags of clothing were lying on a heap of sand. This building was called Kasr-el-bushirra. Farther on, we climbed a gravelly hill on which was a ruined hut. El-Mashnaka, place of the gallows, was its name. From this hill, we had a splendid view of the mountains, which appear to surround the Sabeha, in the direction of Nehy Musa, over the Dead Sea towards the north. This would be the place of all others for a watch tower to overlook the whole Safiyeh. Excepting these ruins there are no other old remains in the Safiyeh, perhaps because the people used long ago, as they do now, to build their dwellings of clay or of sun-dried bricks. We also visited the brook Safiyeh, a good sized, clear stream that murmured as it flowed. It comes down from Wady Karachi. In the afternoon the son of the Sheikh of Kerek arrived from Kerek with 15 or 20 horsemen to welcome us and accompany us there.

February 8th.—After a long and angry discussion with the Ghawarneh Beny 'Atiyeh and Ma'az Bedaween and the people that Sheikh Mujelly of Kerek had sent, matters were at last so far arranged that we were able to start. At 8.15 we passed a small ruin called Kurbet el-Hashib ; unhewn stones were scattered about. At 8.25 we crossed the Wady Karach, a rather rapid brawling stream. The Bedaween bring the water to irrigate the Ghor es-Safiyeh, which is very fruitful, from the Safiyeh and the Karachy. The little plain, Numeira, begins on the other side of the Miswaha, a sluggish, evil-smelling brook, marshy and difficult to cross. The Miswaha is said to rise on Jebel Tuma, a mountain at no great distance. At 10 o'clock we were opposite Wady Khuneizir, through which

the people of 'Orak were accustomed to come down by a steep and rough road ; at 11.10 we had Jebel Jedireh before us, where we discovered traces of wild swine. At 11.15 we reached a considerable plain, strewn with pebbles, Lajarat en-Numeira. Wady Numeira is a small but very full brook, at the upper part of which, we were told, that there were six or seven springs and well watered gardens. Wady Sarmuj was opposite us. We passed several hills and defiles on the peninsula, "lisan." Of these hills, er-Rumeir, et-Tin, et-Tayan, er-Rasifeh were pointed out to us by name. At 2 o'clock we entered a wild romantic gorge, Wady ed-Dera'a. At half-past 2, Wady Weida, with its small palm-trees, lay before us. In Wady-el-Mantara, which we reached at 2.40, and Khurbet ed-Dera'a (3.15) we found traces of former cultivation ; the soil in both places is rich. The Bedaween only graze their cattle there now, the district is so insecure. At 3.30, we came to the little river Dera'a. We pitched our tents there. We found the ruins of 2 Kasr (towers) on a low hill. This point is of great importance as it defends the pass leading up to Kerak. There are no traces of any considerable ruins. Our Kerak Bedaween made a great noise late at night. Two nephews of the great Sheikh Mujelli demanded money from us. After that they quarrelled with each other and took to their pistols. I could not make out whether they were in earnest or only acting, hoping thereby to terrify us and so extort money. The robber horde talked, shouted and screamed all night long and we were thankful when daylight came.

February 9th.—After a long diplomatic discussion we were at length able to resume our journey at 8.20. The band demanded money and yet more money, refusing to wait until we got to Kerak. In comparison with this horde, the Ta'amin and Jehalin Bedaween were perfect gentlemen. Taking them all in all, the tribes on the eastern side of the Jordan are much wilder than those on the western side. It was so in the times of the Hebrews and it is so still. We went along Wadi Dera'a, the stream plashed merrily. What a pleasant sound it was in this waterless country ! its banks were fringed with different kinds of trees and oleander bushes ; we now came to a steep rocky pass Nakb el-Kharaza. There were about a dozen fine palms in the bed of the Wady. We passed two ruined buildings, called el-kabo ("vaults"). A Christian, Daghanjy by name, is said to have formerly levied tribute from travellers in this place. At 9.30 reached Nakb Umm Eshnan (a height). The whole road is very wild and extremely romantic. There are many natural caves in the rocks.

The following names of valleys and peaks were given me in this district : El-Moghra, Umm Kith, Umm Habla el-Bassat, Ruweij, Khuneifes, Sciles-Sachel.

Herds of cattle graze on the steep sides of the mountain ; the people of Kerak, who, like the Bedaween, are herdsmen, live in black tents. At 11.15 we came to a spring Ruseis ; at 12 o'clock we caught sight of the Fort of Kerak. At 12.15 we came to a small rivulet, Sahur pomegranates and figs grew in the valley ; after we had passed another spring, 'Ainel-Bassas, we reached the Fort of Kerak at 1.30.

February 12th.—We started at 8.10 on an exploring expedition in the

neighbourhood. After a steep descent we went up Wady Zijatin, and reached the top of a hill opposite Kerak at 9.15. There was a splendid view of the whole town. It is said that Ibrahim Pacha bombarded the town from this place. The name of the hill is Jalamet es-Sabeha. We were shown several villages in ruins; Umm Hamed, Middin, Abu Hammor, Mugheira, el-Bathra, Nakkad. The country is of a hilly character, the soil is good and partly cultivated with barley and wheat. We reached Keryatein at 9.20, and found there a considerable area of ruins on two low hills facing each other; amongst other things were the remains of pillars and cisterns, but no buildings were standing. From there we saw a small ruin, Masateb. At 10.30 we came to Khurbet Nakkad situated on a hill, and then one after the other to Khurbet 'Azizeh, an old wine-press, Wady Sheily, where there is a well of water and a small ruin, Za'zu, and farther on Khurbet Hawiyeh. We saw Hulhul about half-an-hour away. Came to Mahna at 11.5, where there are considerable ruins and old tanks. Besides this we had an excellent view of the surrounding country. We set out again at 11.40 and at 12.10 came to a stone pillar at Moteh. Here was a Roman milestone, whose inscription was partially defaced by the weather; other stones and pillars lay all around. About half-an-hour distant is Meshhed, where Abu Talib is said to have fallen (?). We left Moteh at 12.25 and saw Mirwad about half-an-hour farther on. At Middin, which is on a steep hill, we found extensive ruins, stones, broken pillars and sarcophagi. From here we saw Shihan, then reached Khurbet Ghuweir, and at 2.45 Khurbet Tatiyeh, where tanks and the remains of Roman roads are to be found.

There are said to be 270 Christians and 514 Muhammedan families in Kerak. The Christians have a church, a school, two priests and a schoolmaster. The inhabitants belong to a great variety of nations, such as Egypt, Petrea, Jerusalem, &c., have no chronicles, and know very little about their ancestors. Their condition is extremely primitive and rude. The Sheikh and his family have autocratic power, but are not quite so despotic as they used to be. In spite of all our inquiries we could find no Phœnician inscriptions, pots or antiquities of value. Here and there we discovered Greek inscriptions in stone houses, but none of any interest. A few good specimens of lamps and coins found in graves were brought to us. Much might have been brought to light by excavation.

ERRATA—"QUARTERLY STATEMENT," 1879.

P. 173, line 32, *for* "pool that was made" *read* "two pools."
P. 174, „ 1, *for* "for" *read* "and as."
P. „ „ 2, *after* "and" *read* "as."
P. „ „ 3, *for* "7." *read* "7,"
P. „ „ 4, *omit* "their."
P. „ „ 8, *after* "stairs" *read* "that go down from."
P. 176, „ 13, *for* "it" *read* "the tomb of David."

ERRATA—"QUARTERLY STATEMENT," 1880.

P. 106, last line, *for* "at" *read* "of."
P. 167, line 12, *omit* "made."
P. 168, „ 17, *for* "Begetha" *read* "Bezetha."
P. 169, „ 10, *after* "dung" *read* "gate."
P. „ „ 12, *for* "Tyropæin" *read* "Tyropæon."
P. „ „ 13, *for* "both in" *read* "in both."
P. 170, „ 1, *omit* "at."